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The World CARPET WOOL Situation *and its relation to world wool production*

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THE WORLD CARPET WOOL SITUATION

and its relation to world wool production

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Introduction

Wool is produced largely in the pastoral countries of the Southern Hemisphere and is used primarily in the industrial nations of the Northern Hemisphere. Five countries--Australia, New Zealand, Union of South Africa, Argentina, and Uruguay--produce about 60 percent of the world's supply and account for about 85 percent of the world's exports. The principal consuming countries are the United Kingdom, the United States, France, West Germany, Japan, and Italy. The United States is both a major producer and consumer--producing about half of its apparel wool requirements. The Soviet Union is also a major producer and consumer of wool. The Communist Bloc is a net importer; very little raw wool from this area enters Free World trade.

In the United States, wool is usually classified in two categories, apparel and carpet, according to its end use. The term carpet wool has not been rigidly defined, but for the purposes of this study it will include the wools which can be imported into the United States free of duty. The term is widely used in the trade to designate the unimproved wools from sheep without English or Merino blood, but in this report carpet wool will refer to both unimproved wool and certain other coarse wool.

Because of their noncompetitive status, carpet wool and apparel wool are considered separately in the United States. The fact that carpet wool is duty free and apparel wool is dutiable makes it fairly easy to distinguish between the two in the United States. However, in world markets it is much more difficult.

There are no agreed world standards, but wool is generally classified by the Commonwealth Economic Committee into three broad types--merino, crossbred, and other. This classification is based on fineness and the kind of sheep from which the wool is taken.

The finest wool is the merino obtained from sheep of that breed or similar breeding. These sheep are well adapted to the arid areas of Australia, South Africa, and the range areas of the United States. They shear a heavy fleece of high-quality wool which commands a premium price. Except in the United States, wool is the primary product, and returns from other products--meat and skins--are of minor importance. Supply is less stable because of the susceptibility of these areas to drought.

Crossbred wool includes wool from sheep of English breeding--except the United Kingdom hill breeds which are mostly unimproved--and from crosses of English and Merino breeding. These sheep are generally found in areas of higher rainfall and of more diversified farming than the Merino. New Zealand, Argentina, and Uruguay are the principal suppliers of crossbred wool. The wool is generally intermediate in fineness between the finer merino and the coarser unimproved wool. It is often further

delineated into fine, medium, and coarse crossbred. Mutton and lamb are joint products with wool, and the supply of wool, especially crossbred, may at times be affected by the demand for mutton and lamb.

Wool in the "other" category of the Commonwealth Economic Committee is the wool from native or unimproved breeds of sheep. The term "unimproved" does not refer to quality or to improvement within the breed but rather indicates that there has not been any upbreeding with English or Merino blood. This wool may also be designated as native wool, named or similar wool, or true carpet wool. The unimproved sheep are often found in arid or mountainous areas of sparse vegetation which are characterized by a nomadic type of agriculture. Fleece weights are light and the quality of the wool for apparel is poor. Other byproducts, such as skins, meat, or even milk, may be more valuable than the wool. The principal producing areas are the U.S.S.R., China, East India, the Middle East, and the Balkans.

Unimproved wools are usually coarse, harsh, wiry, and strong and sound, but lack crimp, which is a distinguishing characteristic of improved wools. Many varieties have a pronounced color defect which, along with their harshness, makes them unsuited for use in many types of apparel. Their coarseness and resilience, however, give them the wearability necessary for carpets--their principal use. They are also used in special types of clothing, such as coarse tweeds, and for mattress stuffing. Considerable quantities of these wools are consumed in the countries in which they are produced, and do not enter world trade. They are often blended with imported fine wool in making coarse cloth. Some quantities are also used in weaving the famous oriental rugs.

The production of unimproved wool apparently has been much more stable than merino or crossbred. However, some of this apparent stability may be due only to inaccurate statistics. The nomadic type of agriculture and the frequent movement across boundaries make it practically impossible to estimate annual changes in production in many of these countries. Data on sheep numbers may be somewhat more accurate, but in some countries these include an unknown number of hair sheep.

Grading Wool

The wide variation in the physical characteristics of wool has resulted in a great number of types. No less than 5,000 separate types of raw wool were classified by the British Wool Control Board during World War II. Important quality characteristics are fineness or diameter of fiber, length of fiber, uniformity, color, luster, elasticity, strength, and suppleness. Wool varies greatly in these qualities with different breeds or types of sheep, different fleeces, and even within the same fleece. (See Appendix, table 1.)

Shrinkage is also a very important consideration in determining the value of wool. Grease wool may shrink from 25 to 70 percent during the scouring process depending upon the amount of dirt, grease, manure, and other foreign matter contained in the fleece. Merino wool generally gives a lower clean yield than crossbred because it contains more grease and usually more dirt and sand from the drier areas where Merinos are produced. Unimproved wools do not contain as much grease but usually have a greater amount of dirt and other foreign matter than merino or crossbred. Most unimproved wools imported into the United States have had some sort of preliminary washing which gives them a relatively high yield. Since wool loses so much of its weight in scouring, production figures in this report are shown both on a grease and clean basis. All figures are on a grease basis unless otherwise specified.

Various systems for classifying or grading raw wool are used throughout the world. The one most widely used is the count system based on the fineness of the fiber. Technically, the count (60's, 64's, etc.) designates the number of hanks of yarn of 560

yards each which can be spun from 1 pound of wool top. The finer the wool the higher the count. As used in the wool trade the term refers to relative fineness rather than its technical meaning.

Merino wool is normally considered as that which grades 60's and finer, while crossbred grades 36's to 60's.

The American count is slightly different than the Bradford (British) count for the same wool, possibly because of differing climatic conditions in the two manufacturing centers. Generally the American count is about one grade lower for the coarser grades of wool. In this study, 48's in the United Kingdom or the Dominions will be considered as equal to 46's in this country. The American count will be used in this study except where otherwise noted. (See Appendix, table 2.)

The blood group system is more commonly used in the United States for grading domestic wools. Originally, the blood grades designated the proportion of Merino blood present in the sheep which produced the wool, but, as used in the trade, the term again refers to the relative fineness of the wool fiber.

There is no established grading system for unimproved wools. They are usually designated by the breed of sheep, or area, or country of origin. Some types are also classified according to color. Important types in the carpet wool trade include Cordova from Argentina, Aleppo from Syria, Scotch Blackface from the British Isles, Karakul from South Africa, and Vicanere from India. Although unimproved wools are generally coarse, it would be difficult to estimate the count because often the fleece is a combination of a coarse outercoat and a fine undercoat, and the variability of fineness is high.

Tariff History

U. S. wools have been protected by a tariff since 1816, except for the periods 1894-97 and 1913-21. Carpet wools, however, have been duty free since 1912. Coarse wools have been subject to a lower rate of duty since 1867. The Tariff Act of 1867 established separate classifications for carpet, combing, and clothing wools. Because imports had long supplied practically the entire demand for carpet wools, the Act of 1922 permitted the United States carpet industry duty free access to these wools. Only unimproved or the true carpet wools were specifically provided for in paragraph 1,101 of the Tariff Act of 1922. In the Tariff Act of 1930 this was extended to include improved wools not finer than 40's.

Under paragraph 1,101(a) of the Tariff Act of 1930 certain named wools--Donskoi, Smyrna, Cordova, Valparaiso, Ecuadoran, Syrian, Aleppo, Georgian, Turkestan, Arabian, Bagdad, Persian, Sistan, East Indian, Thibetan, Chinese, Manchurian, Mongolian, Egyptian, Sudan, Cyprus, Sardinian, Pyrenean, Oporto, Iceland, Scotch Blackface, Black Spanish, Kerry, Haslock, and Welsh Mountain, and similar wools without Merino or English blood, and all other wools not finer than 40's--were permitted duty free entry, if used in floor coverings, press cloth, camel's hair belting, knit or felt boots, or heavy fulled lumbermen's socks. These wools are subject to duty if used for any other purpose, and all other wools are dutiable regardless of use.

Legislation was enacted in 1958 which suspended for 2 years the duties on wools finer than 40's but not finer than 46's, with a 10-percent tolerance of 48's, if used in floor coverings and other specified products.

U. S. production of these types of wool is small. The only unimproved wool produced is that of the Navaho sheep found on the reservation. Less than 5 percent of the domestic production grades 48's or coarser.

World Wool Production By Grades

With the exception of the drought year, 1957, world wool production has expanded rapidly over the past decade. A major part of the increase over this period occurred in Australia, the Soviet Union, New Zealand, and the Union of South Africa. Production increases have been aided by technological progress in pasture improvement and a number of favorable growing seasons. Production figures are based on the wool season beginning in the year shown. The season begins July 1 in Australia, New Zealand, and South Africa, and October 1 in Argentina and Uruguay.

Production declined in 1957 as a result of the drought in Australia and the Union of South Africa, but resumed the upward trend in 1958 to an estimated 5.3 billion pounds. This is about 5 percent above the previous year and a record output. Since 1954, production has increased 670 million pounds.

Fortunately, world wool consumption has generally kept pace with this rise in output, so that large surpluses have not accumulated as for some other agricultural commodities. World wool consumption totaled 2.8 billion pounds (clean basis) in 1958. This is 6 percent below the record level of a year earlier, but with the exception of 1956, is higher than any other previous year.

Changes in production have varied between the major types. Compared with prewar data, output of merino wool has increased 45 percent; crossbred, 60 percent; and unimproved, 15 percent. In the 5 years since 1954, world production of merino rose 20 percent, crossbred 15, and unimproved 2 percent. There was a decline in 1957 in merino output as a result of the drop in output in Australia and the Union of South Africa. (See Appendix, table 3.)

On a clean basis, world output was an estimated 3.1 billion pounds in 1958. Average clean yields vary with the type of wool produced, weather, and other factors. The amount of shrinkage is directly related to fineness, length of staple, and looseness of the fleece. Merino is generally the heaviest shrinking wool because it has a higher yolk or grease content and is fine and short stapled. It is also produced in areas of low rainfall so that it normally receives less washing during the growing season than crossbred wools. Much of the native wool is also produced in arid areas of the Middle East. Although native wools have the lowest grease content, they usually contain a greater amount of other impurities. For this reason they are often stream washed or washed on the sheep's back prior to marketing. Crossbred is the highest yielding wool with an average yield of 63 percent, followed by native with an estimated yield of 58 percent, and merino with an estimated yield of 52 percent. (See Appendix, table 4.)

Native Wool

World production of native wools in 1958 was an estimated 940 million pounds greasy or 545 million pounds on a clean basis. There has been little change in output in the past 5 years. Almost half of this wool is produced in the Sino-Soviet Bloc. The largest producers are Communist China and the Soviet Union. Output in the Soviet Union has declined as a result of an increasing ratio of fine wools to coarse wools. According to Soviet statistics the proportion of coarse wool in the total clip declined from 53 percent in 1940 to 31 percent in 1956. During the same period the proportion of fine wool increased from 12 to 40 percent. There are no official statistics available on production in China but changes in sheep numbers indicate a sharp increase in wool output in recent years. Prior to the Korean War, China was at times a major supplier of U.S. carpet wools but imports have been banned since 1950. Since then, the bulk of the exportable supplies in China and Outer Mongolia have been shipped to the U.S.S.R. Production in the rest of the Sino-Soviet Bloc is largely consumed within the Bloc.

Free World production of native wools declined slightly to 510 million pounds in 1958. The decline chiefly resulted from a drop in output in Iraq caused by adverse weather conditions. The principal Free World producers of native wools are Turkey, India, Iran, the United Kingdom, and Pakistan. Although it appears that production has been relatively stable, it should be remembered that the nomadic type of agriculture in many of these countries reduces the reliability of production estimates.

On a clean basis, Free World production of native wool was an estimated 290 million pounds in 1958. Of this, a considerable amount is normally consumed locally in rugs and coarse cloth or blended with imported fine wools. However, in periods of high prices--as during the Korean War--a much larger proportion enters world trade. In some countries, handwoven rugs are kept as stores of value and these may be torn up and sold to be reprocessed when prices are favorable. Raw wool may also accumulate from year to year in producer's or dealer's hands or may be held for mattress packing or similar uses.

Crossbred Wool

Production of crossbred wool in 1958 is estimated at 2.3 billion pounds greasy and 1.4 billion pounds on a clean basis. Output has risen steadily during the past 5 years and now accounts for about 42 percent of total wool output. There are usually fewer short-run fluctuations in crossbred output than in merino, because it is produced in areas where climate and feed supplies are more stable.

The production of crossbred wool was greatly stimulated near the turn of the century by the development of refrigerated shipping. This opened European markets for meat and encouraged the production of fat lambs in New Zealand, Argentina, and Uruguay, and in part of Australia where rainfall is sufficient to support fat-lamb production. The bulk of the clip in these areas grades 58's and coarser, most of which is used in apparel manufacture. Although Australia is noted more for its production of merino wool, approximately one-fourth of the total clip is crossbred.

The fineness of crossbred wool varies considerably within countries. Most of the Australian and Uruguayan crossbreds grade 50's-60's, while most of the New Zealand clip is coarser than 50's. The Argentine clip contains a large quantity of coarse crossbred wool which is mostly 40's and coarser, but most of the remainder is finer than 48's.

An increasing amount of coarse crossbred wool from Argentina and New Zealand has been used in carpets in recent years. For this reason an attempt has been made to show separately crossbred wool production by grade for the coarser grades. No grade breakdown has been made for the Soviet Bloc because data are not available. Exports of improved wool from this area are negligible. The grades shown in tables are based on American quality counts, and the data for countries using Bradford counts have been lowered one grade to correspond with U. S. import classifications.

One of the problems associated with estimating production by grades is the fact that there is a wide variation of grades within individual fleeces. In such countries as New Zealand where wool is sorted at the shearing shed, a considerable amount of coarse wool is separated from finer fleeces and supplements production of the coarser grades.

Free World production of 40's in 1958 was an estimated 164 million pounds compared with 137 million pounds in 1954. Argentina accounts for more than half of the total output of this category and has been the major supplier of U. S. carpet wool imports for more than 20 years. The other principal supplier of this grade of wool has

been New Zealand. Data on U. S. imports of wool not finer than 40's indicates that production figures for New Zealand are understated. (See section on New Zealand.)

Free World production of 44's in 1958 was an estimated 140 million pounds compared with 101 million pounds in 1954. New Zealand is the largest producer followed by Argentina, the United Kingdom, and Australia. As in the case of 40's, New Zealand production figures for 44's may be understated. On the clean basis, Free World production of 44's in 1958 was an estimated 94 million pounds.

Total output of 46's was an estimated 187 million pounds in 1958 compared with 163 million pounds in 1954. New Zealand again was the largest producer, accounting for about 65 percent of the total. Other less important producers were Argentina, the United Kingdom, and Morocco.

Production of 48's in 1958 totaled 289 million pounds. Output was more widespread than in the coarser grades, but New Zealand was still the major producer. Australia, Argentina, and the United Kingdom were also producers of major significance. On a clean basis, production was 193 million pounds in 1958.

The remainder of crossbred wool production is included in the 50's to 60's category. Free World production of this type in 1958 totaled 1,105 million pounds compared with 1,054 million pounds in 1954. These grades include about 60 percent of total crossbred wool output in the Free World and are chiefly used for apparel manufacture. Wool produced by the English down breeds, which are popular in many countries as mutton producers, and the Corriedale--a popular breed in the Southern Hemisphere--is included in these grades. Major producing countries are Australia, New Zealand, Argentina, Uruguay, and the United States.

Merino Wool

The other large component of the world wool clip is the merino, or fine, wool. Merino production presently accounts for about 40 percent of the total world output and is used almost entirely in apparel. The development of the sheep industry in the most important commercial wool growing areas of Australia, New Zealand, South Africa, Argentina, Uruguay, and the United States was based on the Merino and similar breeds producing wool of 60's or finer quality. New Zealand and the South American countries have since switched to predominantly crossbred types which are better suited for lamb and mutton production. Because of resistance to drought and the high quality of its wool, merino will probably continue to be the major component of wool production in Australia and the Union of South Africa. The Soviet Union has also become a large producer of merino wool.

World production of merino wool in 1958 was estimated 2.1 billion pounds compared with 1.7 billion in 1954. A drought in Australia and South Africa resulted in a 3-percent drop in merino output in 1957. Australia produces about half of the total world output and ships more than two-thirds of total exports. It has often been said that the Australian economy "rides on the sheep's back," since wool normally accounts for about 40 percent of Australia's foreign exchange earnings.

Free World production of merino wool in 1958 totaled 1.9 billion pounds greasy, or an estimated 1.0 billion pounds on a clean basis. Only Australia, South Africa, Argentina, and Uruguay are major exporters.

Carpet Wool Producing Countries

Argentina

Argentina has been the leading supplier of U. S. carpet wool for more than 20 years. Native (criolla) and coarse crossbred wools are usually considered the carpet types. Production of these types was an estimated 130 million pounds in 1958-59 (October-September), compared with 106 million pounds in the 1954-55 season. An increase in total wool output in the past 5 years reverses the downward trend of the preceding period following World War II.

Native and coarse crossbred wools account for about 30 percent of the total clip, of which an estimated 5 percent is native, 5 percent is 44's, and 20 percent is 40's and coarser. About 10 percent of the clip is medium crossbred, 46's and 48's, and the remaining 60 percent is fine crossbred and merino. Estimated average clean yields for the different types are as follows: Native, 55 percent; coarse crossbred, 65 percent; medium crossbred, 60 percent; fine crossbred, 50 percent; and merino, 45 percent. The main native-type sheep is the Cordova, which is named for the province where it originated. Most of the coarse crossbred wool is produced by Lincoln sheep in Buenos Aires and the northern provinces. Argentina probably has more Lincolns than has any other country. They are noted for their heavy fleece and long, coarse wool. In some countries, the Lincoln is principally used to cross with fine wool breeds, which results in a desirable mutton-type sheep with wool of medium fineness. (See Appendix, table 5.)

Argentina's exports of carpet wool vary considerably from year to year because of large stock accumulations and disposals. Stocks tend to be accumulated in periods of declining prices and dispersed in periods of rising prices. The problem was made more acute by the multiple exchange rate system in effect prior to January 1959. Under this system, two exchange rates were used--an official rate of 18 pesos to the dollar and a free market rate which fluctuated but was about 68 pesos at the end of 1958 when the official rate was abolished. Part of the foreign exchange receipts from exports could be exchanged at the official rate and the remainder at the free rate. The proportion varied with the product. Manufactured goods were subsidized by permitting a larger proportion of exchange earnings to be converted at the free rate. In order to prevent false declarations, a list of "aforos" (minimum prices for export) was announced by the government for the various grades and classes of wool. These "aforos" were revised from time to time as world prices changed. In periods of falling prices, however, revision of the "aforos" often lagged behind world prices making it unprofitable to export.

For the 1958-59 season, exports of Argentina wool by grades are available only through June. The United States is the leading market for Argentine wool, especially coarse wool. During the first 9 months of the 1958-59 season, the United States took about 60 percent of the coarse crossbred wool and all of the criolla. The United Kingdom, France, and the Netherlands accounted for most of the remaining coarse crossbred wool. (See Appendix, table 6.)

Argentina exports almost all of its coarse wool. Domestic consumption accounts for only about 3 percent of annual production. Available supplies in some years are augmented by large carryover stocks. The carryover of coarse wool on October 1, 1958, was 65 million pounds, the highest in many years.

Other South American Countries

Besides Argentina, several South American countries produce coarse wool, but only in small quantities. These countries include Brazil, Bolivia, Chile, Colombia, Ecuador, Falkland Islands, Paraguay, Peru, and Venezuela.

The smallest producers, Colombia, Ecuador, Paraguay, and Venezuela, produce collectively about 6 million pounds of native wool annually. Virtually all of this wool is used at home. Brazil and Chile also produce small quantities of native wool. In Brazil, wool output is confined almost entirely to the southern State of Rio Grande du Sul. However, about 1 million pounds of native wool is produced in the northern States and small quantities are exported. Output of 46's and coarser in Rio Grande du Sul was about 3 million pounds in 1958-59. Exports of coarse wool were negligible in 1958.

Chile produces about 2 million pounds of native wool and 1 million pounds of coarse crossbred wool annually. According to the trade, Chilean production of carpet wool is all consumed domestically in carpets and for mattress, pillow, and cushion stuffing.

Output of coarse wool in Peru is declining as a result of increased emphasis on fine wool sheep. In 1958, about 10 percent of the 20-million-pound clip was carpet type, grading 46's and 44's. It is estimated that about half of this is exported.

Bolivia produces about 10 million pounds of coarse and medium crossbred wool annually, all of which is consumed domestically.

New Zealand

New Zealand has been the second leading supplier of carpet wool to the United States since 1951, although production of native or "true" carpet wool is nil. Output of wool not finer than 40's is also small--estimated at 13 million pounds (clean basis) in 1958-59 (July-June).

However, imports of this type into the United States indicate that production is considerably understated. In converting New Zealand grades to American standards, New Zealand 44's were included in the 40's and coarser category. Apparently, a substantial but indeterminate quantity of New Zealand 44/46's and 46's are graded as 40's in the United States. The breakdown of production data by grades is based on an analysis of the greasy wool clip sold at auctions in New Zealand which comprises about three-fourths of total output. It does not include wool shipped on the skins, private sales, and direct shipments for sale at London auctions. (See Appendix, table 7.)

Total wool production in New Zealand has steadily increased, reaching 530 million pounds in 1958-59, with coarse wools taking the lead. Production of 46's and coarser in 1958-59 was 227 million pounds compared with 157 million pounds in 1954-55; output of wools finer than 46's in the past 2 years has declined. In 1957-58 a sharp increase in the coarser types was furthered by an unusually good growing season, continuing pasture improvement by aerial fertilization, and the increased tendency toward strong-wool rams (Leicesters) in the Hawkes Bay area particularly.[1] The increase in sheep numbers has been almost entirely in those types which produce coarser wools.

This coarsening of the clip is likely to continue with expected further expansion of Romney-Border Leicester crosses. The Romney has been the most popular breed in New Zealand for some time because of its ability to withstand the wet climate and because it is a desirable mutton type. One fault of this breed has been its relatively low lambing percentage under existing favorable conditions. Because of this, there is likely to be continued crossing with other long-wool breeds, such as the Leicester, which results in a coarser wool but a higher lambing percentage.

[1]New Zealand Wool Commission, *Sixth Report and Statement of Accounts* (Wellington, 1958), p. 8.

The bulk of the New Zealand clip is exported. Domestic consumption is about 8 million pounds (clean basis), of which 3 million pounds is for carpet use. Carryover stocks usually are small. New Zealand wool export statistics do not distinguish between exports by grades, but, since consumption is small, it seems likely that 90 percent or more of each grade is exported. Purchases at New Zealand auctions indicate that only the United States, the United Kingdom, and occasionally the Soviet Union are buyers of substantial quantities of the coarser types which are suitable for carpet manufacture. (See Appendix, table 8.)

Prices of all types in New Zealand declined sharply in the 1957-58 season. In the 1958-59 auction season (October-May), however, prices for the coarser types were more favorable than for the fine wools.

New Zealand wool prices have been supported by a floor support plan. The Wool Commission buys when auction prices do not exceed the predetermined price support level for each class and grade. Purchases were first made on a large scale late in the 1957-58 season. Total purchases in that year and in the 1958-59 season were 93,015 bales (340 pounds), of which about 45,000 bales were resold. Since carpet types have been in strong demand and prices were relatively favorable in the 1958-59 season, these types were not a significant component of the Wool Commission's holdings.

India

Wool production in India has increased slightly in recent years to an estimated 74 million pounds in 1958. Production is entirely of the unimproved type. Native breeds vary widely--ranging from hair sheep to those with relatively fine wool.

The estimated clean yield for Indian wool as shorn is 65 percent. However, prior to export, wool is stream washed or washed on the sheep's back, so that the average clean yield of exported wool is 83 percent.

Annual production totals about 65 million pounds after washing. Of this, 25 million to 30 million pounds are consumed domestically and 35 million to 40 million pounds are available for export. The finer wools are consumed domestically in coarse cloth, blankets, and carpets; coarser types are exported--mainly for carpet manufacture. Indian wools are among the best carpet wools because of their tough, springy nature.

Exports of raw wool in 1958 totaled 34 million pounds compared with 38 million pounds in 1957. Based on an 83-percent yield, exports in 1958 were 28 million pounds (clean basis). Major destinations were the United Kingdom, the Soviet Union, and the United States. The Soviet Union began buying Indian wool in 1956 and replaced the United States as the second leading buyer in 1958. (See Appendix, table 9.)

Some Indian wool shipped to the United Kingdom is sold at Liverpool auctions and reshipped to the Continent. Liverpool is the world's principal carpet wool auction market. Sales of East Indian (including Afghanistan and Pakistan) wool at Liverpool have declined in recent years as more wool has been purchased direct, following measures taken by the Indian and Pakistan Governments to improve the quality of export wool.

The Indian Government introduced compulsory wool grading early in 1955 to standardize the quality and encourage cleaning of wool entering the export trade. Wool is assembled at inland markets where it is graded and classified by color, yield, and such general characteristics as shorn, pulled, and mixed. Minimum standards of quality and yield have been specified in each category. Each export lot is required to have a certificate of Agmark grading and label showing the serial number, date,

market center, color, and yield. This procedure has increased foreign buyers' confidence in Indian wools.

In past years India re-exported substantial quantities of carpet wool--mainly from Tibet. With the absorption of Tibet by Communist China, shipments of these wools have dwindled and in 1958 were negligible.

India has imported increasing quantities of fine wool for apparel manufacture and blending with native wools. To protect domestic supplies, the government in 1950 placed controls on wool exports in the form of licenses and an overall export ceiling. A regulation was placed in effect which could curb exports of the finer Pashmina wool which is used in domestic manufacture of blankets and clothing, but this wool is presently freely licensed. The exact quantity of the overall export ceilings are never disclosed. Licenses are issued to all shippers on a first-come first-served basis, subject to a limitation of 100 bales per shipper. The export controls have not materially reduced exports, but may restrict sharp increases when prices rise rapidly.

In addition to improving wool marketing practices, the Indian Government is attempting to improve the quality of wool by crossing imported fine-wool rams with native breeds. The extent of upbreeding the native flocks will be limited by rigorous climatic conditions, lack of feed supplies, and limited success of extension education in sheep and wool management. Production of improved wool is not expected to attain commercial importance for some years. Even then it probably would not seriously reduce carpet wool output, because both raw wool and carpets are important hard currency earners.

Pakistan

Export data and estimated internal consumption show that annual wool production in Pakistan in recent years averaged about 35 million pounds annually. Production varies from year to year, but annual changes are difficult to estimate because of the movement of nomads and their flocks across the Afghanistan border. The average clean yield is about 65 percent, although yields of different types and wool from different areas vary from 35 to 80 percent.

All of Pakistan's wool is produced by native breeds of sheep. The only improved sheep are a few Rambouillets on an experimental farm in the Abbotabad area. It is planned to confine crossbreeding to this area to provide fine wools for clothing, but not to interfere with the carpet wool industry which is an important exchange earner. Wool production is limited by the availability of water and grass, but some increase may be effected through better management practices in culling, shearing, and clipping.

A wool grading scheme went into effect in 1954 which has improved the reputation of Pakistan wool in world markets. Wool is graded and the Government Wool Test House issues a certificate of quality stating the clean yield. Each bale for export must have a minimum clean wool content of 70 percent and the maximum vegetable content allowed is 5 percent. Wool is washed prior to export and the average clean yield after washing is about 80 percent. The various types are divided into three grades according to fineness based on micron counts. The grades are Pak Super, 40 microns and finer; Pak Medium, 40.1 to 45.0 microns; and Pak Coarse, 45.1 microns and coarser.

Most of the wool is exported--practically all to the United States and the United Kingdom. Exports were a near-record 37.2 million pounds (actual weight) in 1957 compared with 20.8 million pounds in 1954. Exports fell to 24 million pounds in 1958. Of total shipments during 1954-58, 60 percent were shipped to the United States and 35 percent to the United Kingdom. Some of the wool shipped to England is sold at Liverpool auction sales and ultimately reaches the Continent. (See Appendix, table 10.)

Consumption of domestic carpet wool has increased in recent years from an estimated 5 million pounds in 1954 to 8 million pounds in 1958. According to the National Planning Commission, 10 million pounds will be consumed in 1961. Most of the domestic wool is used in carpet yarns and blankets. Wool tops for clothing manufacture are imported.

There are no estimates of wool stocks in the country, but the level of exports is probably the best indicator. The very large exports in 1957 probably eliminated any carryover.

Syria and Lebanon

Wool production in Syria and Lebanon is entirely of the native type, and the principal kinds are the Awassi, Karradi, and Aleppo. Production in Syria in 1958 was an estimated 20.7 million pounds. Output in the past 3 years has been stable at this record level. The estimated average clean yield is 43 percent.

Virtually all of the Syrian clip is exported. Domestic consumption is confined to mattress wool and annual requirements are approximately 400,000 pounds, clean basis. Exports are almost entirely to the United States and Lebanon--which are subsequently re-exported to the United States. In 1956 the Soviet Union entered the market, and it purchased substantial quantities in 1957 and 1958. Included in Syrian exports are re-exports from neighboring countries, particularly Iraq and Turkey. Some of this wool shows up in Syria's import statistics, but most of it is exported illegally and only trade estimates are available. In 1957, an estimated 4 million pounds entered Syria from Turkey in this manner.

Exports from Syria in 1957 were an estimated 10.9 million pounds (clean basis) of which about 1.9 million were re-exports. Exports of Syrian wool have been relatively stable in recent years, but there has been considerable variation in re-exports. Shipments to the United States are mainly washed wool and pulled wool. The clean yield of washed wool averages about 85 percent while pulled wool averages about 65 percent. (See Appendix, table 11.)

The only export regulations are that wool must be baled and washed except when shipped to countries which normally import only grease wool, such as the Soviet Union.

Lebanon is a minor producer of wool but exports are fairly important because of the transit trade. Production of shorn wool and wool pulled from domestic skins in 1958 amounted to only 1.4 million pounds. Estimates of clean yields are the same as for Syria.

Lebanon's exports are mainly destined for the United States, but the Soviet Union has also been an important market since 1956. Shipments in 1957 totaled 3.9 million pounds (estimated clean basis) of which 3.2 million were re-exports. Sources of re-exports include imports of wool--mainly from Syria--and wool pulled from imported skins. In addition, about 1.5 million pounds were re-exported on the skin in 1957.

Iraq

Iraq's wool production in 1958 was an estimated 23.1 million pounds compared with 28.4 million a year earlier. Output was reduced sharply by drought and the high incidence of foot-and-mouth disease in 1957 which reduced the lamb crop. On a clean basis, 1958 production is estimated at 15.0 million pounds. The average clean yield of Iraq's clip is estimated at 65 percent.

The entire output is of the native type, although the Arabi, most of which is used in the domestic industry, grades between 40's and 56's. The other principal types of wool produced in Iraq are the Awassi and the Karradi. These wools are coarser than the Arabi, vary from 6 to 11 inches in length, and are mostly exported for carpet wool. Iraq produces a high percentage of black and grey wool which is discounted in price.

The bulk of Iraq's output is exported as carpet wool--mainly to the United States. Smaller quantities are shipped to Syria and Lebanon, but these are mostly re-exported to the United States. The United Kingdom is also a fairly important market. The sharp decline in exports in 1958 reflects the fall in output and the disruption of the market by political changes. (See Appendix, table 12.)

Wool going into the export trade is washed either in the river or in cement tanks and yields about 80 percent clean wool.

Improvement of the Iraqi clip has been through selection of better types of the indigenous breeds rather than in crossing with English or Merino blood. Little attention is given to livestock improvement at the present time. The present government is committed to strong support of local industry which may expand the domestic consumption of raw materials, including wool.

Iran

Wool output in Iran in 1958 was an estimated 44 million pounds. Production has increased slightly in recent years with increases in sheep numbers. Virtually all the wool is produced by native breeds of sheep and the average clean yield is estimated at 50 percent.

Less than half the clip is exported. The Soviet Union normally takes the bulk of Iran's wool exports. Total exports in 1958-59 (March 21-March 20) were 18.6 million pounds, of which 15.7 million were shipped to the Soviet Union and 2.1 million were destined for the United States. Unlike the other carpet wool exporting nations of the Middle East, very little of Iran's wool is washed prior to export. (See Appendix, table 13.)

Annual domestic consumption has accounted for about 24 million pounds in recent years. Most of this is utilized by the cottage industry in hand woven rugs. The famed Persian rugs have been known in world trade for centuries. As a foreign exchange earner, carpets are second only to oil. Carryover stocks are normally small and price fluctuations are usually narrow.

Ireland

Wool output in Ireland increased from 16.5 million pounds in 1954 to 20.0 million pounds in 1958. Practically the entire clip is coarse or medium type. Production of native wool, mainly Irish Blackface, accounts for an estimated 25 percent of the total. The remainder of the clip is composed as follows: 40's, 20 percent; 44's, 15 percent; 46's, 15 percent; 48's, 15 percent; and 50's and finer, 10 percent. The average clean yield for 40's and native wool is estimated at 68 percent and for the other grades at 75 percent.

Most of Ireland's wool is exported. During the past 5 years, exports have amounted to about 90 percent of total output. Shipments in 1958 totaled 18.1 million pounds (actual weight). Principal export markets were the United Kingdom, 9.9 million pounds; the United States, 3.2 million pounds; and Italy, 1.3 million pounds. Trade estimates indicate that about 40 percent of the wool shipped to the United Kingdom is

carpet type. Exports to the United States are almost entirely carpet types and shipments to Italy are mostly 32/40's, "Shafty Whites," used in the bulk mattress trade.

The trends in sheep numbers and wool production are expected to flatten out at about present levels.

United Kingdom

There are probably more different breeds of livestock in the United Kingdom than in any other country, including approximately 40 identified breeds of sheep, producing a variety of wool types. These can be broken down into three main types: Mountain or hill breeds (Blackface, Swaledale, Herdwick, etc.), longwool breeds (Lincoln, Leicester, etc.), and down breeds (Hampshire, Dorset, etc.). Generally the hill breeds produce coarse, native type wool, the longwool breeds produce coarse crossbred, and the down breeds produce fine and medium crossbred wool. (See Appendix, table 14.)

This breakdown by types is based on wool graded by the British Wool Marketing Board. No grade breakdown is available for the offsorts and pulled wool, but the same percentage has been applied to these as for the shorn wool. It is likely that a smaller proportion of the pulled wool is carpet type, but this may be offset by a larger proportion of the offsorts which include locks, cotts, and oddments.

Output of hill wool, mainly Blackface, has increased more sharply than other types in the past 2 years and accounts for about one-third of total wool production. These wools are especially suitable for carpets because of their strength and resilience. However, the best Blackface wool is often used in specialty cloths, such as Harris tweed. Blackface wool is very coarse, ranging from 28's to 36's, Bradford count.

Production of 40's, 44's, and 46's also increased in 1957 and 1958, but not as sharply as native types. Total production of native and other wool not finer than 46's in 1958 is estimated at 75 million pounds, compared with 66 million pounds in 1954.

The average clean yield of the total clip is about 66 percent, but hill wools are higher yielding--about 70 percent.

Although the United Kingdom is the largest consumer and importer of wool in the world, a substantial part of the domestic clip is exported. In fact, raw wool is the leading agricultural export of the United Kingdom. Exports in 1957 totaled 22.6 million pounds (clean basis), 30 percent of total production. Because of the large number of breeds and variety of wool types produced, these wools are in demand for specialty uses in other countries. The principal export markets are Italy, West Germany, and the United States.

No estimates are available to show exports of wool by grade, but a large proportion is probably coarse wool. It is understood that about all of the wool shipped to the United States and Canada is for the carpet trade, and about half of that shipped to Italy is for the carpet and mattress trade. The British Wool Marketing Board estimates that carpet wool exported from the United Kingdom in 1956 totaled between 11 million and 14 million pounds and that it went to all major destinations except the U.S.S.R.

Virtually all shorn wool produced in the United Kingdom is marketed through the Wool Marketing Board. Growers receive scheduled prices based on the average guaranteed price fixed annually by the government. At the beginning of each wool season the Board issues a schedule of prices for different types of wool. The relationship between grades is adjusted in line with auction prices during the previous season. The

price of Blackface was raised in the 1959 schedule because of strong demand for this type. Hill wools receive a bonus of 3 cents a pound to encourage production.

Union of South Africa

Wool production in the Union of South Africa, including Basutoland and South-West Africa, in 1958-59 (July-June) was an estimated 312 million pounds. As in Australia, drought reduced production in 1957, but some recovery was made in 1958. The Union is the second largest producer and exporter of merino wool in the world.

Output of merino, including "native" and "coarse and colored" wool, accounts for about 94 percent of the total clip. Wool designated as "native wool" is actually a low-yielding merino wool from sheep owned by the Africans, while "coarse and colored" is merino wool containing a certain amount of kemp resulting from the crossing of merinos and indigenous hair sheep. Production of crossbred wool is small—1 percent of the total clip—but has been increasing in recent years.

The only carpet wool produced is karakul wool, which accounts for about 5 percent of the total clip. This wool is produced mainly in South-West Africa, where the karakul sheep are raised primarily for fur production. The pelts of the karakul lambs are very valuable when the animals are slaughtered at an early age. Production of karakul wool declined from 19.9 million pounds in 1955 to 14.2 million in 1957, largely as a result of the drought.

Virtually the entire karakul clip is exported, mainly to France, the United Kingdom, the United States, and Germany. Total shipments in 1957-58 were 14.0 million pounds.

Turkey

Turkey is an important producer of native wool and used to be a substantial exporter. In recent years, domestic consumption has increased and exports have declined. There were no exports in 1957 and 1958. Turkey has been encouraging expanded production of fine wool in order to reduce import needs. In 1956, a wool and mohair corporation was established to increase the number of Merino sheep and the quality of wool produced.

In 1958 about 2 million pounds of a total clip of 79 million pounds was merino. The remainder of the wool is coarse, native type. In the past 2 years all of the wool has been used domestically in carpets, army uniforms, blankets, and shepherds' clothing. With favorable wool prices in 1959, Turkey has resumed exports.

Southern Europe

Five countries of southern Europe--Spain, Portugal, Italy, Greece, and Yugoslavia--produce a substantial quantity of coarse wool, but exports are small. Wool production in these countries has been fairly stable in recent years.

Spain's wool output in 1958 totaled 75 million pounds, of which about 19 million pounds was unimproved. Output of merino wool totaled 22 million pounds and crossbred, 34 million. Most of the crossbred wool is of the coarser types; production of 46's and coarser totaled 25 million pounds. The entire clip is normally consumed domestically.

Although total wool production in Portugal has changed little in recent years, output of unimproved (churra) wool has declined. Chief reasons given for this decline are the reforestation program on mountain lands which are normally grazed by churra sheep

and the weak export demand, especially from the United States. Total production in 1958 was 23 million pounds. Of this, 10 million pounds was merino; 6 million, unimproved; and 7 million, crossbred. Exports of washed churra wool averaged about 1 million pounds annually in 1954-57, virtually all to the United States. Shipments of other wool have declined since 1954 and totaled only 385,000 pounds (actual weight) in 1957. Major destinations were the United States, Germany, and Italy.

Production in Italy has declined in recent years. About one-fourth of the 32-million-pound clip in 1958 was unimproved. Most of this wool is produced by the Sarda sheep on the island of Sardinia. Along with their wool, these sheep produce the renowned sheep's milk cheese, Pecorino. Unlike the mainland, Sardinia has continued to increase its sheep numbers in recent years. The coarse wool is used largely in mattress stuffing, but some is exported. Total wool exports in 1957 were 4.6 million pounds (actual weight). Major destinations were the United States, the United Kingdom, and West Germany. No estimates are available as to the type of wool exported, but U. S. import statistics indicate that most of the shipments to this country--2.0 million pounds--were carpet wool.

Production of wool in Yugoslavia has also declined slightly in recent years, to 34 million pounds in 1958. The government has embarked on a crossbreeding or "merinization" program to increase the output of fine wool. As a result, the proportion of native wool declined from 66 percent in 1956 to an estimated 56 percent in 1958. In the same period, crossbred increased from 33 percent to 42 percent and merino rose to 2 percent of the total clip. Exports are almost entirely native wool because exports of wool finer than 40's are not permitted. Shipments in recent years have averaged about 2 million pounds, and principal destinations have been the United Kingdom, the United States, and the Netherlands.

Wool output in Greece has been relatively stable in recent years, at a level of 23 million pounds. Virtually all the wool is of the native type. A few Merino sheep were raised on experimental farms before World War II. Sheep are raised chiefly for meat and milk, and wool production is of lesser importance. Most of the wool is used at home, but small quantities are exported to the United States, the United Kingdom, and other countries.

North Africa

Formerly, the North African countries of Algeria, Egypt, Morocco, and Tunisia were considered important producers of native wool. However, crossing with Merinos and other improved breeds through the years has resulted in considerable upbreeding. Most of the sheep--except for those in Egypt--now have some admixture of English or Merino blood.

Wool output in Morocco in 1958 was 36 million pounds. Morocco has three principal breeds of sheep--the Barbary, producing native type wool; the Urdighia, producing crossbred wool of about 46's count; and the Aboudia, producing crossbred wool finer than 50's. Exports vary considerably and in 1957 totaled almost 9 million pounds. Principal destinations were France, the United Kingdom, and Belgium. Production in Algeria has been about 19 million pounds, annually, in recent years. Algeria produces a small amount of merino and the rest is crossbred. Exports have declined in recent years and in 1956-58 averaged 1.8 million pounds. Major destinations were France, the United Kingdom, Belgium, and Italy.

Tunisia produces about 8 million pounds of wool annually, of which about one-fourth is exported. Production is mainly fine and medium crossbred types. Egypt's wool output in recent years has been about 5 million pounds, of which about 10 percent

was exported--mainly to the United States. Production is entirely carpet wool clipped from the native sheep.

Soviet Union

Wool output in the Soviet Union has increased sharply in recent years from about 475 million pounds in 1954 to 700 million in 1958. These figures exclude animal hair--mostly camel hair--which is included in the official Soviet statistics. Thus, the U.S.S.R. is now the second largest producer of wool in the world. It is the largest producer of native wool, although output of this type has declined in recent years.

Soviet publications indicate considerable improvement in recent years in wool quality. Wool output is classified as either fine (merino), semifine (fine crossbred), semicoarse (medium and coarse crossbred), or coarse (native). The proportion of fine and semifine wool in the total increased from 12 percent in 1940 to 40 percent in 1956. In the same years, the proportion of coarse wool declined from 53, to 31 percent.[2] Reported widespread use of artificial insemination may have been a factor in the sharp increase in fine wool production.

The principal fine wool breeds in the U.S.S.R. are the Soviet Merino, Caucasian, and Prekos. Karakuls are included in the coarse wool breeds and the Corriedale, Lincoln, Romney, Hampshire, and other British breeds are among those which produce semifine and semicoarse wool.

In addition to domestic supplies, the Soviet Union imports substantial quantities of wool. In 1957, imports totaled 126 million pounds (washed basis), of which 79 million pounds was coarse and semicoarse wool and 47 million pounds was fine. Most of the coarse wool was shipped from China, Mongolia, Afghanistan, Iran, and India. Major sources of fine wool were South Africa, Uruguay, Argentina, and New Zealand. Exports from the U.S.S.R. in 1957 totaled 30 million pounds. These were practically all coarse and semicoarse wools and were probably mostly re-exports. The bulk of these exports was shipped to East Germany and Czechoslovakia. Both imports and exports include an unknown amount of animal hair.

Eastern Europe

Wool production in the Soviet Bloc countries of Eastern Europe (Albania, Czechoslovakia, Bulgaria, East Germany, Hungary, Poland, and Rumania) has been virtually stable in recent years, at a level of about 130 million pounds annually. About 50 percent of this output is unimproved wool and about 20 percent is merino.

The entire production in Albania and Bulgaria and half the clip in Poland and Rumania are thought to be unimproved wool. Exports from these countries are negligible, if any, and substantial quantities of apparel wool are imported, mainly by Poland and Czechoslovakia.

China Mainland and Outer Mongolia

There are no official wool production figures available for Communist China, including Tibet. Based on reported increases in sheep numbers, it appears that production has increased sharply in recent years, to about 145 million pounds in 1958. The entire clip is included in the unimproved category, although United Kingdom import

[2] *Forty Years of Soviet Power in Facts and Figures*, Moscow, 1958, p. 173.

statistics list some merino and crossbred wool from China. An official statement says that 2 million head of improved sheep were being bred this year.[3]

China's sheep population includes many native types which can be divided into three main groups--Tibetan, Mongolian, and Kazakh. The Tibetan has a coarser fleece and smaller tail than the fat-tailed Mongolian sheep. The Kazakh is a fat-rumped variety. Some subtypes of Mongolian sheep including the Han, Tung, and Woozie, produce a relatively fine fleece.

China, prior to World War II, was an important source of U. S. carpet wool. Imports from China and Tibet have been banned since the Korean War. Now, most of China's wool exports go to the U.S.S.R. Soviet imports of Chinese wool in 1955-57 averaged about 30 million pounds annually (washed basis). Exports to non-Communist countries in recent years have been very small. The United Kingdom imported 3 million pounds in 1957 and about 1 million pounds in previous years. Shipments to France, West Germny, Japan, and Belgium totaled about 4 million to 5 million pounds in 1957.

Tibet formerly shipped wool through India to the West, but these shipments have virtually ceased in the past 2 years.

Wool output in Outer Mongolia is roughly estimated at 40 million pounds, annually, based on shipments to the U.S.S.R. However, Soviet wool statistics, as mentioned previously, include other animal hair. Soviet imports of wool from Mongolia in 1955-57 averaged 26 million pounds (washed basis). Small quantities of this wool are reexported to the United States.

Other Wool Producing Countries

The following countries are major producers of apparel wool, but produce small quantities of coarse wool.

Australia

Australia is the largest producer and exporter of wool, accounting for almost one-third of the world production, and about one-half of world exports. Wool production is based largely on the Merino sheep which yields a heavy fleece grading 60's and finer. In 1957-58 the proportion of merino and crossbred wool to the total clip was 75 and 25 percent, respectively, compared with a 70:30 ratio in 1955-56. The sharp increase in fine wool that season shows the effect of drought on wool fineness.

Output of crossbred wool, 46's and coarser, in 1958-59 is estimated at 13 million pounds--less than 1 percent of the total clip. Production of 48's in the same period is estimated at 56 million pounds, or 3.5 percent of the total clip. (See Appendix, table 15.)

The average appraised clean yield for the total Australian clip in 1957-58 was 59 percent compared with 60 percent in the previous year and 55 percent in 1946-47. The estimated average yields of merino and crossbred wool are 56 and 65 percent, respectively.

Australia exports about 95 percent of the wool it produces. Since coarse wool is imported from New Zealand and other countries, it may be assumed that a large proportion of its own production of coarse wool is used domestically.

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[3]International Wool Secretariat, *World Wool Digest*, Vol. IX, No. 24, (London:Harrison and Sons, Ltd., 1958), p. 222.

Uruguay

Most of the wool produced in Uruguay is crossbred, but output of coarse crossbred types is small and has been declining in recent years. Of total production of 198.4 million pounds in 1957-58, 7.5 million pounds was 46's and coarser. By comparison, 1954-55 production totaled 192.2 million pounds and 46's and coarser reached 11.5 million. The bulk of the Uruguayan clip is superfine crossbred, 58/60's. (See Appendix, table 16.)

Average clean yields of Uruguayan wools are estimated as follows: 46's and coarser, 70 percent; 48's and 50's, 68 percent; finer than 50's, 65 percent; and merino, 51 percent.

Exports of the coarser grades of wool are small and go primarily to Western Europe and the United States.

United States

Production of native-type wool in the United States is limited to a small amount of Navajo produced on the Indian reservation and a very small quantity of karakul. Since the Navajo wool is largely consumed in Indian hand-woven goods, virtually all wool consumed by the carpet industry is imported. Output of domestic wool grading 48's and coarser accounts for less than 5 percent of total production.

Most of the wool produced in the United States is merino (fine and half-blood). Based on an analysis of the 1946 clip, almost 70 percent of the clip was merino, and the remaining 30 percent was crossbred wool. The average clean yield of the total shorn wool clip was 44 percent.

Carpet Wool Exports

World exports of carpet wool are difficult to estimate since trade statistics do not usually distinguish between grades. However, it is possible to estimate exports of native and similar wools since the entire wool production falls in this category in most of the countries which ship these wools. In some other countries that produce both native wools and finer wools, exports are usually predominantly native wools, as the fine wool is needed for home use.

Native Wool

A much smaller proportion of native wool than merino or crossbred is exported because production is more widespread. Production of merino and crossbred is concentrated in the major producing countries of the Southern Hemisphere which export a very large proportion of their clip. Because much of the native wools are grown in areas of subsistence agriculture, the local handicraft industries use a large share of the output.

Exports of native wools increased from 220 million pounds (actual weight) in 1954 to 254 million pounds in 1957. Exports fell off sharply in 1958 as shipments from Argentina, Pakistan, and India declined. The major exporters to the Free World are India, Pakistan, Argentina, Syria, Iraq, and South Africa. China and Outer Mongolia are large exporters, but practically all shipments are destined for the Soviet Union. Afghanistan and Iran also ship the bulk of their exports to the Soviet Union. During the past 3 years the Soviet Union has also purchased substantial quantities of native wool from India and Syria, but most of the exports from these and other major suppliers are shipped to the United States and the United Kingdom. Small quantities are shipped to other carpet manufacturing countries of Western Europe. Although carpet is the

predominant end use, some types are in demand for mattress stuffing and other specialty uses.

Exports from the Free World in 1958 were estimated at about 123 million pounds (clean basis) about the same as in 1954, but considerably lower than in 1957. Because the wool is usually washed in some manner, native wool exports yield a relatively high percentage of clean wool. The average yield of exports from the Free World is estimated at about 75 percent. Exports of native wool in 1954-58 accounted for about half of Free World production. (See Appendix, table 17.)

Coarse Crossbred Wool

The only major exporting country that distinguishes wool exports by grades is Argentina, where data are available for exports of coarse crossbred wool (44's and coarser) and medium crossbred (48's and 46's). For most other countries, estimates of exports by grades were derived in this report by using the same proportion of exports as production of that grade. For example, if 10 percent of production graded 46's, then it was assumed 10 percent of total exports was the same grade. In some countries, however, a larger proportion of the coarse wool is exported and finer wools are consumed domestically in apparel. In others, such as Australia, it is believed that a smaller proportion of the coarser wool is shipped abroad, since these grades of wool are imported from New Zealand and other sources.

Exports of crossbred wool, 40's and coarser, in 1958 were an estimated 120 million pounds (actual weight), up sharply from a year earlier. Argentina accounted for 80 percent of the total. Shipments have shown considerable variance from year to year, mainly reflecting fluctuations in Argentine supplies. The vagaries of the Argentine foreign exchange control system cause exports to fluctuate rather sharply, and large stocks are accumulated in some years.

The Argentine exports shown in tables 18 and 19 are generally larger than the Argentine production data in tables 30 and 31. This discrepancy is partially accounted for by stock accumulations at the beginning of the period and the fact that exports relate to calendar year data while production is for the crop year (October-September).

World exports in 1958 were equal to about 96 million pounds (clean basis). The yield was very high--80 percent--as an unusually large proportion of scoured wool was shipped from Argentina. During part of the year the exchange rate in Argentina for scoured wool was so favorable to shippers that this wool could be purchased by importers at a lower price than grease wool of the same grade. Shipments of Argentine coarse crossbred wool were mainly to the United States and the United Kingdom.

New Zealand also ships significant quantities of 40's and coarser wool, being the second leading supplier of U. S. carpet wool imports of this grade in recent years. Like its production, New Zealand's exports of 40's are probably understated (see page 8). (See Appendix, table 18.)

Exports of crossbred 44's in 1958 were an estimated 92 million pounds (actual weight) compared with 65 million pounds in 1954. Most of the increase occurred in New Zealand, which accounted for 80 percent of total shipments of this grade in 1958. Other suppliers included Argentina, the United Kingdom, and Ireland.

Most of these exports were probably destined for the United States and the United Kingdom. Prior to the suspension of duties on this wool in the United States for use in carpets, most of the imports of this grade were used in papermaker's felt--a blanket-like fabric in a long belt used to carry thin layers of wet pulp at high speed through a

series of rollers which press the water from the pulp to form paper. (See Appendix, table 19.)

Exports of 46's have also increased in recent years. Shipments in 1958 totaled 117 million pounds, actual weight, or 86 million pounds, clean basis. New Zealand ships about 90 percent of the estimated total exports.

Exports of 44's and 46's--the grades for which the United States tariff duties were suspended in 1958--totaled 209 million pounds, actual weight, or 155 million pounds (clean basis) in 1958. Exports of these grades will probably continue to increase as New Zealand output is expected to continue to rise. (See Appendix, table 20.)

Estimated shipments of crossbred 48's have remained fairly stable in recent years. Exports in 1958 totaled 160 million pounds, actual weight, or 116 million pounds clean basis. As in the case of 44's and 46's, New Zealand is the leading supplier—accounting for almost three-fourths of total exports. Australia is also a major exporter of this grade, shipping an estimated 50 percent of its production.

The legislation which suspends the duties on 44's and 46's provides for a 10-percent tolerance of 48's. Quantities of this wool which will come into the United States duty free will probably be small. (See Appendix, table 21.)

Carpet Wool Consumption

There are no official statistics available for world consumption of carpet wool, but estimates are available for certain major consuming countries. Since no large stocks are now available, it can be assumed that, over the years, consumption has equaled production. As indicated by export statistics, about half of the production of native wool in the Free World is consumed locally in commercial and home weaving of carpets, blankets, and coarse clothing, as well as in mattresses and padding. The remainder of the clip is exported--mainly to the United States and the United Kingdom, where the bulk of it is used in carpets. In periods of exceptionally high prices, such as during the Korean War, a larger proportion is attracted to the big industrial manufacturing countries.

Carpet manufacture provides an important outlet for wools, especially the coarser types. In the United States, consumption of carpet wool at 119 million pounds (scoured basis) was more than one-third of total U. S. wool consumption in 1958. In the United Kingdom, the second leading consumer, consumption of 56 million pounds accounted for less than an eighth of total wool usage. For the major manufacturing countries as a whole, it is estimated that about a seventh of total wool consumption is used in carpets.[4]

There are three major types of carpet production. Most of the carpets produced in the major manufacturing countries are machine woven, in which the pile is inserted in the backing as part of the weaving process. Small but increasing quantities of wool are used in the second type--tufted carpets, in which cut lengths of pile are inserted into an existing canvas and held by an adhesive coating. The third type--the hand-woven oriental rug--is produced only in those underdeveloped countries where labor is cheap, for each tuft is hand knotted around the warp or backing threads.

Because they are somewhat a luxury product, carpets are used primarily in the more developed economies of the Western Hemisphere. Oriental rugs are mainly exported to the United States and the United Kingdom. The United States is also an

[4]International Wool Secretariat, *Carpet Production and Trade*, World Wool Digest, Vol. VIII, No. 14, (London: Harrison and Sons, Ltd., July 11, 1957), p. 157.

important market for Belgian and Japanese carpets, while the United Kingdom sells large quantities of carpets to the British Dominions.

United States

Consumption of carpet wool in the United States increased sharply from an average 88 million pounds (scoured basis) annually in 1934-38 to 173 million pounds in 1946-50. Postwar building expansion, pent-up demand from World War II and a shift to better quality and larger carpets of the broadloom type each contributed to the rise in carpet wool consumption. Mill use declined sharply in 1951 but since then has been comparatively stable, ranging between 114 million and 144 million pounds. Consumption declined in 1957 and 1958 in line with a general textile recession, but not so sharply as apparel wool. (See Appendix, table 22.)

Since 1951, per capita carpet wool consumption has tended to level out at slightly above the prewar level while apparel wool consumption has continued to decline and is now well below the prewar level. One important factor has been the greater use of synthetics in apparel. The use of synthetics in both apparel and carpets rose very sharply in 1951 when wool prices zoomed. Since then, the proportion of raw wool used in carpet yarns has been slightly higher than in 1951 but the proportion used in spinning apparel yarn on the woolen system--about half of total apparel wool consumption--has continued to decline, from 42 percent in 1951 to 34 percent in 1958. The proportion of raw wool used in spinning carpet yarn has increased sharply in 1959, and the proportion of manmade fiber has declined.

An interesting development in carpet wool consumption has been the greatly expanded use of wool in tufted carpets. Much of the 65 percent gain in carpet wool use in January-August 1959 is attributed to this development. Production of tufted rugs and carpeting increased from 21 million square yards in 1951 to 114 million in 1958. Principal fibers used in tufted rugs are cotton and rayon. Prior to this year use of wool in these rugs has been limited by technical difficulties, but this apparently has been overcome as consumption in the early months of 1959 was reportedly 300 percent above the level of a year earlier.

The United States imports virtually all of its carpet wool requirements. Therefore, imports move in line with consumption levels. With high postwar consumption, imports reached a record level of 233 million pounds (clean content) in 1948. In recent years, imports have averaged about 130 million pounds annually. (See Appendix, table 23.)

Argentina has been the leading supplier of U. S. carpet wool for a number of years. New Zealand, India, Pakistan, Iraq, and Syria are other major suppliers. China was an important but erratic supplier prior to World War II, but imports have been banned since the Korean War. In addition to raw wool imports, wool carpets are imported in fairly large quantities. The raw wool content of these imports was an estimated 14 million pounds in 1958.

United Kingdom

The United Kingdom is the second largest consumer of carpet wool in the Free World. Consumption in 1958 totaled 55.8 million pounds, about the same as in the previous year and prewar. In contrast with the United States, the United Kingdom has used about the same quantity of carpet wool annually in recent years, with the exception of 1956 when usage fell sharply as a result of a decline in both export and domestic demand. A reduction in the purchase tax from 30 to 15 percent effectively increased domestic purchases in 1957 and 1958.

A substantial proportion of raw wool used in carpets in recent years has been crossbred wool finer than 40's. Use of 44's to 48's, American grade, in 1958 accounted for over 30 percent of total carpet wool consumption. Even small amounts of wools finer than 48's, including merino, have been used in recent years. The traditional carpet wools or native wools accounted for only about 30 percent in contrast with prewar when they formed the bulk of carpet wool. The use of rayon and other manmade fibers has increased sharply in the past 2 years accounting for most of the expansion in total fiber consumption in 1957 and 1958. The proportion of all-wool carpets produced declined from 90 percent in 1955 to 69 percent in 1957. (See Appendix, table 24.)

In contrast with the United States, the United Kingdom uses a sizable proportion of domestic wool in carpets. It is estimated that about 20 percent in recent years was produced in the United Kingdom.

Imports of native wool in 1954-58 totaled about 40 million pounds (actual weight) annually, compared with a prewar average of 73 million pounds. The principal sources--India, Pakistan, Ireland, Argentina, and South Africa--have not changed, however. Consumption data in table 24 indicates that only about half of this wool is used in carpets. About 3 million pounds a year is re-exported. (See Appendix, table 25.)

Substantial quantities of crossbred wool are imported, mainly from Argentina and New Zealand, for use in carpets. Exact amounts are not available, but, consumption data indicate that about 50 percent, or 27 million pounds, of the wool used in carpets is imported crossbred wool.

Soviet Union

From the supplies of carpet-type wool available, it would appear that the Soviet Union is the largest consumer of carpet wool. Production of coarse and semicoarse wool (native and coarse crossbred) was 238 million pounds (clean basis) and net imports were 45 million to 50 million pounds in 1957. It is doubtful, however, that carpet production exceeds that of the United States or even the United Kingdom. Large amounts of this wool are probably used in coarse apparel and blankets.

Other Countries

The other principal consuming countries are Belgium, France, West Germany, Japan, and Italy. Although consumption data are incomplete, estimates show that total mill use of carpet wool in these countries was about 45 million pounds (clean basis). Consumption in most of these countries has increased in recent years.

Estimated carpet wool consumption in Belgium has increased from 8 million pounds in 1951 to 16 million in 1958. Virtually all of this wool is imported. New Zealand, the United Kingdom, Argentina, India, Pakistan, and North African countries are the principal suppliers.

West German consumption of carpet wool in 1958 was estimated at 9.4 million pounds. Imports from China, India, Pakistan, New Zealand, and Argentina supplement the small amount of domestic supplies.

France consumed about 8.5 million pounds of carpet wool in 1958.

Consumption of carpet wool in Japan in 1958 is estimated at 5.6 million pounds, compared with 6.4 million pounds a year earlier. Principal sources of supply are New Zealand, India, and the United Kingdom.

Italy consumed an estimated 4.2 million pounds of carpet wool in 1958 compared with 4.0 million the previous year. Most of the wool used in 40's to 48's grades was supplied by New Zealand and North African countries.

STATISTICAL APPENDIX

TABLE 1.--Wool: Predominant grades, by breed of sheep

Classification and breed	Wool grades			
Fine-wool breeds:				
Delaine-Merino	64's,	1/70's,	80's	
Rambouillet	60's,	1/70's,	80's	
Medium-wool breeds:				
Cheviot	1/50's,	56's		
Columbia	50's,	1/56's,	58's,	60's
Corriedale	50's,	1/56's,	58's,	60's
Dorset	48's,	1/50's,	56's	
Hampshire	50's,	1/56's,	58's	
Shropshire	50's,	1/56's		
Southdown	56's,	1/58's,	60's	
Suffolk	50's,	1/56's,	58's	
Long-wool breeds:				
Border Leicester	1/40's,	46's		
Cotswold	36's,	1/40's		
English Leicester	36's,	1/40's		
Lincoln	1/36's,	40's		
Romney	40's,	44's,	1/46's,	48's

1/ Grade of wool most likely to be found.

A. L. Anderson, Introductory Animal Husbandry, New York. (The MacMillan Co., 3rd Edition, 1958, p. 565.)

TABLE 2.--Wool: Comparable grades by country 1/

United Kingdom and Dominions	United States		Argentina	Uruguay
	Grade	Blood group		
Merino 60's and finer	58/60's and finer	High 1/2 blood to fine	Fine Supra, Prima and Merina	Fine Supra, Prima Merina and Prima Cruza A.
Fine crossbred 56's to 60's	50's to 58/60's	3/8 blood to 1/2 blood	Prima Cruza I and Cruza (fina)	Prima Cruza B and Cruza (fina).
Medium crossbred 48/50's to 56's	44/46's to 50's	1/4 blood to 3/8 blood	Cruza (mediana)	As for Argentina.
Coarse crossbred 36's to 48's	36's to 44's	Low 1/4 blood Common and braid	Cruza (gruesa)	As for Argentina.
Carpet wool 2/				

1/ Derived from approximate comparisons of the Commonwealth Economic Committee--no agreed world standards exist.

2/ Many of the carpet wools are sold by description (e.g. Vicanere, Aleppo, etc.); however, much of the coarse crossbred category is also used in carpets.

TABLE 3.--Wool: Production by type and grade in the Sino-Soviet Bloc and the Free World, grease basis, annual 1954-58 and percent of total production, 1958

Type and grade	1954	1955	1956	1957	1958 1/ Quantity	1958 1/ Percent of total wool production
	Million pounds	Million pounds	Million pounds	Million pounds	Million pounds	Percent
Sino-Soviet Bloc:						
Merino	105	135	150	175	205	4
Native	415	420	410	420	430	8
Crossbred	255	290	310	345	385	7
Total	775	845	870	940	1,020	19
Free World:						
Merino	1,640	1,710	1,885	1,800	1,895	36
Native	505	505	510	515	510	10
Crossbred:						
40's	137	137	140	156	164	3
44's	101	102	107	124	140	3
46's	163	163	167	173	187	4
48's	265	276	289	271	289	5
50's-60's	1,054	1,097	1,127	1,071	1,105	20
Total crossbred	1,720	1,775	1,830	1,795	1,885	35
World:						
Merino	1,745	1,845	2,035	1,975	2,100	40
Native	920	925	920	935	940	18
Crossbred	1,975	2,065	2,140	2,140	2,270	42
Total	4,640	4,835	5,095	5,050	5,310	100

1/ Preliminary.

TABLE 4.--Wool: Production by type and grade in the Sino-Soviet Bloc and the Free World, clean basis, annual 1954-58 and average clean yield, 1958

Type and grade	1954	1955	1956	1957	1958 1/ Quantity	1958 1/ Clean yield
	Million pounds	Million pounds	Million pounds	Million pounds	Million pounds	Percent
Sino-Soviet Bloc:						
Merino	50	60	70	75	95	47
Native	250	250	245	250	255	60
Crossbred	150	170	180	205	225	59
Total	450	480	495	530	575	56
Free World:						
Merino	825	880	995	950	1,000	53
Native	280	280	285	290	290	56
Crossbred:						
40's	87	87	90	101	106	65
44's	65	67	70	83	94	67
46's	108	109	112	117	125	66
48's	176	184	194	181	193	66
50's-60's	654	688	704	663	677	62
Total crossbred	1,090	1,135	1,170	1,145	1,195	63
World:						
Merino	875	940	1,065	1,025	1,095	52
Native	530	530	530	540	545	58
Crossbred	1,240	1,305	1,350	1,350	1,420	63
Total	2,645	2,775	2,945	2,915	3,060	57

1/ Preliminary.

TABLE 5.--Argentina: Exports of raw wool by country of destination, actual weight, season beginning Oct. 1, 1954-58

Country of destination	1954	1955	1956	1957	1958 1/
	Million pounds	Million pounds	Million pounds	Million pounds	Million pounds
United States	75	85	69	61	86
United Kingdom	27	28	37	20	50
U.S.S.R.	5	---	11	---	31
France	20	34	30	14	36
Netherlands	20	14	17	6	22
Japan	9	45	9	18	16
Germany, West	22	12	8	5	19
Italy	5	5	17	5	24
Belgium	10	11	10	4	9
Poland	---	4	5	9	10
Other	20	7	5	8	14
Total	213	245	218	150	317

1/ October-June only.

Argentine Wool Federation.

TABLE 6.--Argentina: Exports of wool by country of destination and by grade, actual weight, October 1958-June 1959

Country of destination	Fine	Fine crossbred	Medium crossbred	Coarse crossbred	Criolla	Total
	Million pounds	Million pounds	Million pounds	Million pounds	Million pounds	Million pounds
United States	1.6	2.8	1.0	72.7	8.1	86.2
United Kingdom	5.8	20.5	3.8	20.0	---	50.1
U.S.S.R.	4.8	25.9	.1	.3	---	31.1
France	1.6	24.0	3.2	7.4	---	36.2
Netherlands	2.3	9.3	2.5	7.6	---	21.7
Japan	.5	13.9	.8	.4	---	15.6
Germany, West	2.6	11.9	1.9	2.3	---	18.7
Italy	2.3	15.8	2.4	3.5	---	24.0
Belgium	.9	4.7	.7	3.1	---	9.4
Poland	2.7	7.3	.1	---	---	10.1
Other	1.1	9.9	1.0	1.7	---	13.7
Total	26.2	146.0	17.5	119.0	8.1	316.8

Argentine Wool Federation.

TABLE 7.--New Zealand: Wool production by type and grade, grease basis, season beginning July 1, 1954-58

Type and grade	1954	1955	1956	1957	1958
	Million pounds	Million pounds	Million pounds	Million pounds	Million pounds
Merino	14.8	15.1	17.0	14.3	14.0
Crossbred:					
40's and coarser 1/	8.2	8.4	9.6	13.8	18.0
44's	48.0	50.0	53.9	70.3	85.0
46's	100.7	102.3	106.2	112.2	124.0
48's	131.2	135.0	145.6	137.1	140.0
50's and finer	152.2	151.0	158.3	148.7	149.0
Total	455.1	461.8	490.6	496.4	530.0

1/ Understated, see text.

Derived from data supplied by the New Zealand Wool Commission.

TABLE 8.--New Zealand: Exports of raw wool by country of destination, actual weight, annual 1954-58

Country of destination	1954	1955	1956	1957	1958
	Million pounds	Million pounds	Million pounds	Million pounds	Million pounds
United Kingdom	186.5	185.4	163.3	159.5	170.0
France	67.7	67.5	77.9	87.5	84.7
United States	29.5	38.3	55.3	39.6	55.8
Germany, West	24.4	36.8	31.2	38.5	26.6
Poland	9.0	10.9	9.6	11.8	11.4
Italy	14.1	11.4	18.3	15.3	21.8
Belgium	15.1	19.3	23.8	22.6	25.1
U.S.S.R.	9.3	6.2	7.4	9.1	3.3
Netherlands	11.5	11.0	10.7	9.4	10.1
Other	25.4	30.1	30.4	36.9	47.5
Total	392.5	416.9	427.9	430.2	456.3

TABLE 9.--India: Exports of raw wool by country of destination, actual weight, annual 1954-58

Country of destination	1954	1955	1956	1957	1958
	Million pounds	Million pounds	Million pounds	Million pounds	Million pounds
United Kingdom	17.4	14.9	15.4	16.4	12.9
U.S.S.R.	---	---	4.4	5.7	9.0
United States	9.6	11.1	11.0	8.9	7.2
Belgium	.2	.3	1.4	1.7	1.4
France	.3	.5	.8	2.1	1.3
Germany, West	.6	.7	.8	1.3	.8
Other	1.0	.8	1.3	1.7	1.7
Total	29.1	28.3	35.1	37.8	34.3

TABLE 10.--Pakistan: Exports of raw wool by country of destination, actual weight, annual 1954-58

Country of destination	1954	1955	1956	1957	1958
	Million pounds	Million pounds	Million pounds	Million pounds	Million pounds
United States	8.1	17.5	17.0	24.0	13.1
United Kingdom	11.2	11.2	8.0	11.9	9.6
Australia	.1	(1/)	.1	.4	.3
Germany, West	1.0	.8	.6	.6	.3
Other	.4	.5	.5	.3	.3
Total	20.8	30.0	26.2	37.2	23.6

1/ Less than 50,000 pounds.

TABLE 11.--Syria: Exports of raw wool by country of destination, actual weight, annual 1954-58

Country of destination	1954	1955	1956	1957	1958
	Million pounds	Million pounds	Million pounds	Million pounds	Million pounds
United States	6.9	8.4	8.6	8.1	5.5
Lebanon	2.3	5.0	5.4	3.0	1.0
U.S.S.R.	---	---	.9	2.2	5.6
Italy	1.0	1.0	1.1	.9	1.4
United Kingdom	.1	.8	---	---	---
Other	.2	.3	.8	.1	1.0
Total	10.5	15.5	16.8	14.3	14.5

TABLE 12.--Iraq: Exports of raw wool by country of destination, actual weight, annual 1954-58

Country of destination	1954	1955	1956	1957	1958
	Million pounds	Million pounds	Million pounds	Million pounds	Million pounds
United Kingdom	4.9	7.7	10.1	10.2	5.7
United States	2.7	1.0	1.2	.3	1.8
Lebanon	1.1	2.2	2.9	1.2	.1
Syria	.1	.6	.8	---	.9
France	1.2	.3	.1	.1	.1
Germany, West	.3	.3	.1	.2	.4
Other	.3	1.8	.9	.4	---
Total	10.6	13.9	16.1	12.4	9.0

TABLE 13.--Iran: Exports of raw wool by country of destination, actual weight, annual 1954-58 1/

Country of destination	1954	1955	1956	1957	1958
	Million pounds	Million pounds	Million pounds	Million pounds	Million pounds
U.S.S.R.	13.7	14.8	15.0	12.1	15.7
United States	3.0	3.6	3.4	3.9	2.1
United Kingdom	.1	.1	.5	.6	---
Netherlands	.3	.8	1.0	.2	.1
Other	.5	.5	.9	1.5	.7
Total	17.5	19.8	20.8	18.3	18.6

1/ Season beginning Mar. 21 of year shown.

TABLE 14.--United Kingdom: Production of wool by grades, grease basis, annual 1954-58

Type and grade	1954	1955	1956	1957	1958
	Million pounds	Million pounds	Million pounds	Million pounds	Million pounds
Native and similar	33.4	33.6	35.4	39.5	40.4
Crossbred:					
40's and coarser	14.6	14.1	13.5	13.8	14.4
44's	9.5	9.2	9.4	10.4	10.6
46's	8.4	8.2	8.3	9.1	9.1
48's	11.5	12.1	12.5	14.0	14.6
50's and finer	27.2	24.7	25.0	26.8	27.3
Total	104.6	101.9	104.1	113.6	116.4

Unpublished letter from British Wool Marketing Board.

TABLE 15.--Australia: Wool production by type and grade, grease basis, year beginning July 1, 1954-58

Type and grade	1954	1955	1956	1957	1958
	Million pounds	Million pounds	Million pounds	Million pounds	Million pounds
Merino 1/	925.0	987.6	1,135.5	1,079.0	1,127.0
Crossbred:					
40's and coarser	3.4	4.1	3.4	3.4	3.5
44's	7.3	7.9	8.3	6.4	7.1
46's	1.9	2.2	2.2	1.7	2.0
48's	44.7	52.7	56.6	41.4	56.0
50's and finer	300.7	362.5	358.0	301.1	348.4
Total	1,283.0	1,417.0	1,564.0	1,433.0	1,544.0

1/ Includes 60/58's.

TABLE 16.--Uruguay: Wool production by type and grade, grease basis, year beginning Oct. 1, 1954-58

Type and grade	1954	1955	1956	1957	1958
	Million pounds	Million pounds	Million pounds	Million pounds	Million pounds
Crossbred:					
40's and coarser	1.0	0.7	0.4	0.2	---
44's	4.8	4.4	3.7	3.3	3.1
46's	5.7	4.6	4.7	4.0	3.5
48's	5.8	5.3	4.9	5.0	3.9
50's	10.6	11.5	12.2	13.6	11.4
Finer than 50's	135.5	125.1	133.1	144.3	127.1
Merino	28.8	26.7	28.1	28.0	27.0
Total	192.2	178.3	187.1	198.4	176.0

Prepared from data supplied by the Uruguayan Ministry of Livestock and Agriculture.

TABLE 17.--Native and similar wools: Estimated world exports by country of origin, actual weight and clean basis, 1954-58

Country of origin	1954	1955	1956	1957	1958 1/
ACTUAL WEIGHT	Million pounds	Million pounds	Million pounds	Million pounds	Million pounds
India	29.1	28.3	35.1	37.8	34.3
Pakistan	20.8	30.0	26.2	37.2	23.6
Iran 2/	17.5	19.8	20.8	18.3	18.6
Argentina	12.8	17.2	14.0	18.5	9.8
Afghanistan	11.6	17.1	15.7	(3/)	(3/)
Syria	10.5	15.5	16.8	14.3	14.5
Iraq	10.6	13.9	16.1	12.4	9.0
Union of South Africa	11.6	17.0	16.3	12.7	12.6
United Kingdom	10.6	11.6	11.9	11.4	13.2
Ireland	3.0	3.9	4.4	3.9	4.5
China, Mainland 4/	(3/)	32.0	28.7	30.2	(3/)
Outer Mongolia 4/	(3/)	28.7	27.6	23.1	(3/)
Other 5/	24.3	25.5	20.5	18.9	14.0
Total 6/ 7/	220.0	260.0	254.0	254.0	224.0
CLEAN BASIS					
India	24.2	23.5	29.1	31.4	28.5
Pakistan	16.6	24.0	21.0	29.8	18.9
Iran 2/	10.5	11.9	12.5	11.0	11.2
Argentina	7.3	9.5	8.6	12.3	6.5
Afghanistan	7.0	11.0	10.0	(3/)	(3/)
Syria	8.9	13.2	14.3	12.2	12.3
Iraq	8.5	11.1	12.9	9.9	7.2
Union of South Africa	8.2	11.8	11.5	8.7	8.4
United Kingdom	8.6	9.5	9.7	9.4	10.8
Ireland	2.5	3.1	3.5	3.2	3.5
China, Mainland 4/	(3/)	28.8	25.8	27.2	(3/)
Outer Mongolia 4/	(3/)	25.8	24.8	20.1	(3/)
Other 5/	17.7	18.0	15.6	13.3	6.4
Total 6/ 7/	172.0	201.0	199.0	198.0	173.0
Of which Free World 7/	116.0	143.0	145.0	150.0	123.0

1/ Preliminary.
2/ For season beginning Mar. 21 of year shown.
3/ Not available.
4/ Imports into Soviet Union.
5/ Includes Cyprus, Egypt, France, Greece, Iceland, Italy, Jordan, Lebanon, Libya, Morocco, Norway, Portugal, Turkey, Yugoslavia, and shipments from Tibet through India.
6/ Includes estimates where data are not available.
7/ Figures may not total exactly because of rounding.

Estimated from data supplied by the Agricultural Attaches and other information.

TABLE 18.--Wool, crossbred 40's and coarser: Estimated exports by country of origin, actual weight and clean basis, 1954-58

Country of origin	1954	1955	1956	1957	1958
ACTUAL WEIGHT	Million pounds	Million pounds	Million pounds	Million pounds	Million pounds
Argentina	98.2	115.3	80.5	71.3	94.4
New Zealand 1/	7.9	8.3	8.6	12.9	13.7
United Kingdom	5.3	5.8	5.9	5.7	6.6
Ireland	2.4	3.1	3.5	3.1	3.6
All other 2/	2.1	2.7	2.9	2.3	1.7
Total 3/	116.0	135.0	101.0	95.0	120.0
CLEAN BASIS					
Argentina	69.3	81.0	59.1	52.5	76.7
New Zealand 1/	5.8	6.2	6.4	9.6	10.1
United Kingdom	4.3	4.7	4.8	4.7	5.4
Ireland	2.0	2.4	2.8	2.5	2.7
All other 2/	1.4	2.1	2.3	1.7	1.1
Total 3/	83.0	96.0	75.0	71.0	96.0

1/ Understated, see text. 2/ Includes Italy, Netherlands, Uruguay, and Australia. 3/ Figures may not total exactly because of rounding.

Estimated from data supplied by the Agricultural Attaches and other information.

TABLE 19.--Wool, crossbred 44's: Estimated exports by country of origin, actual weight and clean basis, 1954-58

Country of origin	1954	1955	1956	1957	1958
ACTUAL WEIGHT	Million pounds	Million pounds	Million pounds	Million pounds	Million pounds
New Zealand	47.1	50.0	51.4	68.8	73.0
Argentina	10.9	12.8	9.0	8.0	10.5
United Kingdom	2.7	2.9	3.0	2.8	3.3
Ireland	1.8	2.3	2.7	2.3	2.7
Other 1/	2.3	2.4	2.5	2.1	2.3
Total 2/	65.0	70.0	69.0	84.0	92.0
CLEAN BASIS					
New Zealand	34.8	37.2	38.1	50.9	53.9
Argentina	7.7	9.0	6.6	5.8	8.5
United Kingdom	2.2	2.4	2.4	2.3	2.7
Ireland	1.5	1.8	2.1	1.8	2.0
Other 1/	1.5	1.6	1.5	1.4	1.5
Total 2/	48.0	52.0	51.0	62.0	69.0

1/ Includes Peru, Uruguay, and Australia. 2/ Figures may not total exactly because of rounding.

Estimated from data supplied by the Agricultural Attaches and other information.

TABLE 20.--Wool, crossbred 46's: Estimated exports by country of origin, actual weight and clean basis, 1954-58

Country of origin	1954	1955	1956	1957	1958
ACTUAL WEIGHT	Million pounds	Million pounds	Million pounds	Million pounds	Million pounds
New Zealand	90.3	95.9	98.4	98.9	105.0
United Kingdom	2.7	2.9	3.0	2.8	3.3
Ireland	1.8	2.3	2.7	2.3	2.7
Argentina	2.6	2.0	3.2	1.9	2.5
Morocco	2.1	2.0	1.7	2.1	1.3
Other 1/	4.1	3.5	3.4	2.8	2.2
Total 2/	104.0	109.0	112.0	111.0	117.0
CLEAN BASIS					
New Zealand	66.7	71.3	73.0	73.1	77.5
United Kingdom	2.2	2.4	2.4	2.3	2.7
Ireland	1.5	1.8	2.1	1.8	2.0
Argentina	1.8	1.4	1.8	1.4	1.8
Morocco	1.6	1.5	1.4	1.6	.9
Other 1/	2.5	2.2	2.2	1.8	1.4
Total 2/	76.0	81.0	83.0	82.0	86.0

1/ Includes Brazil, Falkland Islands, Peru, Uruguay, Algeria, Tunisia, and Australia. 2/ Figures may not total exactly because of rounding.

Estimated from data supplied by the Agricultural Attaches and other information.

TABLE 21.--Wool, crossbred 48's: Estimated exports by country of origin, actual weight and clean basis, 1954-58

Country of origin	1954	1955	1956	1957	1958
ACTUAL WEIGHT	Million pounds	Million pounds	Million pounds	Million pounds	Million pounds
New Zealand	110.0	116.7	119.8	116.8	118.6
Australia	22.3	26.3	28.3	20.7	28.0
Argentina	6.1	4.7	7.6	4.3	5.7
United Kingdom	2.7	2.9	3.0	2.8	3.3
Ireland	1.8	2.3	2.7	2.3	2.7
Uruguay	2.3	2.7	2.3	.7	.3
Other 1/	6.2	4.8	4.0	3.7	1.7
Total 2/	151.0	160.0	168.0	151.0	160.0
CLEAN BASIS					
New Zealand	81.2	86.8	88.9	85.9	87.6
Australia	14.5	17.1	18.4	13.5	18.0
Argentina	4.2	3.2	4.3	3.2	4.1
United Kingdom	2.2	2.4	2.4	2.3	2.7
Ireland	1.5	1.8	2.1	1.8	2.0
Uruguay	1.8	2.1	1.8	.6	.3
Other 1/	3.4	2.6	2.1	2.1	1.0
Total 2/	109.0	116.0	120.0	109.0	116.0

1/ Includes Brazil, Falkland Islands, Algeria, and Tunisia. 2/ Figures may not total exactly because of rounding.

Estimated from data supplied by the Agricultural Attaches and other information.

TABLE 22.--Apparel and carpet wool: U.S. mill consumption, scoured basis, selected averages 1934-55, annual 1950-58

Year	Apparel	Carpet	Total	Year	Apparel	Carpet	Total
	Million pounds	Million pounds	Million pounds		Million pounds	Million pounds	Million pounds
Average:							
1934-38..	256	88	344	1952.....	347	120	467
1946-50..	479	173	652	1953.....	358	136	494
1951-55..	328	121	449	1954.....	270	114	384
Annual:				1955.....	281	133	414
1950.....	437	198	635	1956.....	297	144	441
1951.....	382	102	484	1957.....	241	128	369
				1958.....	217	119	336

Compiled from reports of the Bureau of Census.

TABLE 23.--Carpet wool: U.S. imports for consumption by country of origin, clean content, average 1934-38, annual 1954-58

Country of origin	Average 1934-38	1954	1955	1956	1957	1958
	Million pounds	Million pounds	Million pounds	Million pounds	Million pounds	Million pounds
Argentina	20.9	45.2	57.7	52.7	46.6	45.2
New Zealand.....	4.8	9.5	11.3	21.2	12.9	32.1
Pakistan.....	(1/)	5.5	11.1	13.8	14.2	10.8
India.....	12.7	8.9	10.2	10.9	7.2	6.1
Syria.....	4.2	7.6	11.6	11.7	9.2	5.3
United Kingdom.....	10.0	1.7	3.8	4.5	2.2	5.0
Iraq.....	3.8	7.4	11.0	11.0	9.4	4.1
Iran.....	.2	2.8	2.5	3.6	3.4	2.8
Other.....	29.4	13.5	16.8	13.7	15.9	11.2
Total.....	86.0	102.1	136.0	143.1	121.0	122.6

1/ Included with India.

Compiled from reports of the Bureau of Census.

TABLE 24.--Wool and other fibers: United Kingdom consumption by carpet manufacturers and woolen spinners, mainly spinning carpet or rug yarns, clean basis, annual 1954-58

Fiber used	1954	1955	1956	1957	1958
	Million pounds	Million pounds	Million pounds	Million pounds	Million pounds
w wool:					
Native	18.0	18.6	15.3	18.4	17.3
40's and coarser	24.0	22.4	18.4	21.4	20.5
44's-48's	14.5	15.7	14.9	14.9	17.8
50's and finer	.5	.4	.4	.3	.2
Total	57.0	57.1	49.0	55.0	55.8
yon and other man-made fibers	2.2	2.7	5.0	7.6	10.9
her 1/	1.5	1.4	1.1	1.1	1.2
Total fibers	60.7	61.2	55.1	63.7	67.9

1/ Includes wool wastes, shoddy, etc., cotton wastes and hair.

Compiled from data supplied by the Wool Industry Bureau of Statistics, Bradford, England.

TABLE 25.--Native wool 1/: United Kingdom imports by country of origin, actual weight, average 1934-38, annual 1954-58

Country of origin	Average 1934-38	1954	1955	1956	1957	1958
	Million pounds	Million pounds	Million pounds	Million pounds	Million pounds	Million pounds
India	40.1	21.0	16.1	14.4	(2/)	(2/)
Ireland	6.8	4.3	6.5	6.9	(2/)	(2/)
Pakistan	(3/)	10.0	8.2	6.3	(2/)	(2/)
Union of South Africa	---	2.2	2.8	1.3	(2/)	(2/)
Argentina	13.4	1.0	1.2	.4	(2/)	(2/)
Other	12.4	6.7	7.5	10.1	(2/)	(2/)
Total	72.7	45.2	42.3	39.4	41.0	33.4
Retained imports 4/	5/60.0	41.6	38.8	36.3	38.3	31.6
Estimated clean basis	45.0	31.0	33.0	29.0	30.0	22.6

1/ Wool other than merino and crossbred.
2/ Breakdown by country not available.
3/ Included with India.
4/ Imports less re-exports.
5/ Estimated.

Compiled from Trade and Navigation of the United Kingdom.

TABLE 26.--Wool: Production in specified countries, grease basis, annual 1954-58 1/

Country	1954	1955	1956	1957	1958
	Million pounds	Million pounds	Million pounds	Million pounds	Milli pound
North America:					
Canada	8.1	8.0	7.9	7.9	7
Mexico	9.9	9.0	9.6	10.0	10
United States 3/	309.8	304.8	307.4	292.6	292
Total North America 4/ 5/	330.0	325.0	325.0	310.0	310
South America:					
Argentina	365.0	363.0	392.0	408.5	423
Brazil	55.9	60.5	61.8	66.7	60
Chile	41.9	46.2	47.7	47.3	48
Falkland Islands	4.5	4.5	4.6	4.5	4
Peru	22.5	23.6	20.7	18.7	19
Uruguay	192.2	178.3	187.1	198.0	176
Total South America 5/ 6/	700.0	690.0	730.0	760.0	750
Europe:					
France	56.0	56.0	60.0	61.6	64
Germany, West	10.7	10.4	10.7	11.7	12
Greece	23.9	23.8	23.4	23.3	23
Ireland	16.5	17.4	18.7	18.3	20
Italy	36.8	34.3	31.9	32.0	32
Norway	7.9	8.0	8.0	8.0	8
Portugal	22.7	22.7	23.9	23.4	22
Spain	78.5	78.5	74.8	78.5	74
United Kingdom	104.6	101.9	104.1	113.6	116
Total West Europe 5/ 7/	370.0	365.0	370.0	385.0	390
Bulgaria	31.4	31.7	32.3	31.4	30
Germany, East 8/	14.1	15.6	15.2	15.0	15
Hungary	12.1	12.6	14.4	14.8	14
Poland	19.7	21.7	21.5	22.0	22
Rumania	42.3	45.7	43.0	42.1	40
Yugoslavia	36.7	35.8	32.8	30.9	32
Total East Europe 5/ 9/	165.0	175.0	170.0	165.0	165
Total Europe 5/	535.0	540.0	540.0	550.0	555
U.S.S.R. (Europe and Asia)	494.0	553.0	566.0	630.0	700
Africa:					
Algeria	18.6	18.8	18.8	19.0	19
Egypt	5.1	5.2	5.2	5.2	5
Morocco	36.6	36.6	36.2	34.2	36
Tunisia	8.8	8.4	8.0	8.4	8
Union of South Africa 10/	305.5	313.8	320.8	299.1	312
Total Africa 5/ 11/	390.0	400.0	405.0	380.0	395

TABLE 26.—Wool: Production in specified countries, grease basis, annual 1954-58 1/--Continued

Country	1954	1955	1956	1957	1958 2/
	Million pounds	Million pounds	Million pounds	Million pounds	Million pounds
ia:					
Iran	39.7	43.0	44.1	43.2	44.1
Iraq	22.0	15.4	26.2	28.4	23.1
Syria	20.5	19.4	20.7	20.7	20.7
Turkey (Europe and Asia)	79.7	81.0	76.6	83.6	79.2
China, Mainland 12/	110.0	114.0	126.0	132.0	145.0
India	72.0	72.0	72.0	74.0	74.0
Japan	6.0	8.4	8.4	8.6	8.7
Pakistan	35.0	35.0	35.0	35.0	35.0
Total Asia 5/ 13/	450.0	445.0	475.0	490.0	495.0
eania:					
Australia	1,282.7	1,417.4	1,564.3	1,433.0	1,577.0
New Zealand	455.0	461.7	490.6	496.0	530.0
Total Oceania 5/	1,740.0	1,880.0	2,055.0	1,930.0	2,105.0
World total 5/	4,640.0	4,835.0	5,095.0	5,050.0	5,310.0

1/ For summary purposes, wool produced mostly in the spring in the Northern Hemisphere is combined .th that produced in the season beginning July 1 or Oct. 1 of the same year in the Southern Hemisphere. ılled wool is included for most countries at its grease equivalent.
2/ Preliminary.
3/ Converted "pulled wool" to grease basis at 1.7.
4/ Includes estimates for Hawaii, Greenland, Guatemala, and Cuba.
5/ Figures may not total exactly because of rounding.
6/ Includes estimates for Bolivia, Colombia, Ecuador, Paraguay, and Venezuela.
7/ Includes estimates for Austria, Belgium-Luxembourg, Denmark, Finland, Iceland, Malta, Netherlands, veden, and Switzerland.
8/ Includes state collections only, actual weight basis; does not include private sales, if any.
9/ Includes estimates for Albania and Czechoslovakia.
10/ Includes Basutoland and South-West Africa.
11/ Includes estimates for Ethiopia and Eritrea, Libya, French West Africa and Togo, and Kenya.
12/ Includes China proper (22 provinces), Manchuria, Jehol, Sinkiang (Turkestan), and Tibet.
13/ Includes estimates for Cyprus, Israel, Jordan, Lebanon, Outer Mongolia, Afghanistan, and Nepal.

Prepared or estimated on the basis of official statistics of foreign governments, other foreign ource materials, reports of U.S. Agricultural Attaches and Foreign Service Officers, results of ffice research and related information. Estimates for countries having changed boundaries have een adjusted to present boundaries except as noted.

TABLE 27.--Native wool: Estimated world production, grease basis, 1954-58 1/, and percent of total production, 1958

Country	1954	1955	1956	1957	1958 2/ Quantity	1958 2/ Percent of total wool production
	Million pounds	Million pounds	Million pounds	Million pounds	Million pounds	Percent
Total, North America 3/	1.0	1.0	1.0	1.0	1.0	---
South America:						
Argentina.....	18.0	18.0	19.0	20.0	21.0	5
Total, South America 4/	28.0	28.0	28.0	28.0	29.0	4
Europe:						
Greece 5/.....	23.9	23.8	23.3	23.3	23.1	100
Ireland.....	4.1	4.4	4.7	4.6	5.0	25
Italy.....	8.8	8.2	7.6	7.6	7.6	24
Portugal.....	6.6	6.6	6.4	6.2	6.2	30
Spain.....	19.6	19.6	18.7	19.6	18.7	25
United Kingdom.....	33.4	33.6	35.4	39.5	40.4	35
Yugoslavia 5/.....	24.2	23.6	21.6	18.8	18.1	55
Total, West Europe 6/..	130.0	129.0	127.0	128.0	128.0	33
Bulgaria.....	7/30.00	7/31.7	32.3	31.4	7/31.0	100
Poland.....	9.8	10.8	10.7	7/10.5	7/10.0	50
Rumania.....	21.1	22.8	21.5	7/21.0	7/21.0	50
Total, East Europe 8/..	67.0	71.0	71.0	69.0	68.0	40
Total, Europe.....	197.0	200.0	198.0	197.0	196.0	35
U.S.S.R. (Europe and Asia)..	198.0	195.0	173.0	179.0	177.0	25
Africa:						
Egypt.....	5.1	5.2	5.2	5.2	5.2	100
Morocco 9/.....	20.1	20.1	19.9	18.8	20.0	55
Union of South Africa 10/.	19.1	19.9	17.2	14.2	15.0	5
Total, Africa 11/.....	56.0	58.0	54.0	50.0	52.0	13

TABLE 27.--Native wool: Estimated world production, grease basis, 1954-58 1/, and percent of total production, 1958--Continued

Country	1954	1955	1956	1957	1958 2/ Quantity	1958 2/ Percent of total wool production
	Million pounds	Million pounds	Million pounds	Million pounds	Million pounds	Percent
Asia:						
Afghanistan 7/	18.0	18.0	18.0	18.0	18.0	100
India	70.0	72.0	72.0	74.0	74.0	100
Iran	39.7	43.0	44.1	43.2	44.1	100
Iraq	22.0	15.4	26.2	28.4	23.1	100
Pakistan	35.0	35.0	35.0	35.0	35.0	100
Syria	20.5	19.4	20.7	20.7	20.7	100
Turkey	77.7	79.0	74.6	81.6	77.2	98
Total 12/	290.0	289.0	300.0	308.0	300.0	98
China, Mainland 7/	110.0	114.0	126.0	132.0	145.0	100
Outer Mongolia 7/	40.0	40.0	40.0	40.0	40.0	100
Total, Asia	441.0	445.0	465.0	481.0	485.0	98
Total, Free World 13/	505.0	505.0	510.0	515.0	510.0	42
Sino-Soviet Bloc 13/	415.0	420.0	410.0	420.0	430.0	12
World total 13/	920.0	925.0	920.0	935.0	940.0	18

1/ Derived from estimates of total wool production in table 26.
2/ Preliminary.
3/ Includes estimates for Cuba, Greenland, and Guatemala.
4/ Includes estimates for Brazil, Chile, Colombia, Ecuador, Paraguay, and Venezuela.
5/ Generally considered as "similar wools," but in some cases are classified by the Bureau of Customs as graded wools.
6/ Includes estimates for Finland, France, West Germany, Iceland, Malta, Norway, Sweden, and Switzerland.
7/ Unofficial estimates based on sheep numbers or other factors.
8/ Includes estimates for Albania and Czechoslovakia.
9/ Types entered into the United States are classified by the Bureau of Customs as graded.
10/ Includes Basutoland and South-West Africa.
11/ Includes estimates for Ethiopia and Eritrea, French West Africa, and Libya.
12/ Includes estimates for Cyprus, Israel, Jordan, Lebanon, and Nepal.
13/ Figures may not total exactly because of rounding.

Compiled from data supplied by the Agricultural Attaches and other information.

TABLE 28.--Native wool: Estimated world production, clean basis, 1954-58, and average clean yield, 1958

Country	1954	1955	1956	1957	1958 1/	
					Quantity	Average clean yield
	Million pounds	Million pounds	Million pounds	Million pounds	Million pounds	Percent
Total, North America 2/...	0.5	0.5	0.5	0.5	0.5	50
South America:						
Argentina.....	9.9	9.9	10.4	11.0	11.6	55
Total, South America 3/...	15.0	15.0	15.0	16.0	16.0	55
Europe:						
Greece.....	15.5	15.5	15.1	15.1	15.0	65
Ireland.....	2.8	3.0	3.2	3.1	3.4	68
Italy.....	4.9	4.6	4.2	4.2	4.2	55
Portugal.....	2.2	2.2	2.1	2.1	2.1	33
Spain.....	9.5	9.5	9.3	9.9	9.3	48
United Kingdom.....	23.4	23.5	24.8	27.6	28.3	70
Yugoslavia.....	13.8	13.5	12.3	10.8	10.3	57
Total, West Europe 4/.....	77.0	76.0	76.0	78.0	78.0	60
Bulgaria.....	16.5	17.4	17.8	17.3	17.0	55
Poland.....	5.4	5.9	5.9	5.8	5.5	55
Rumania.....	11.6	12.5	11.8	11.6	11.6	55
Total, East Europe 5/.....	37.0	39.0	39.0	38.0	37.0	55
Total, Europe.....	114.0	115.0	115.0	114.0	115.0	58
U.S.S.R. (Europe and Asia)....	129.0	124.0	113.0	115.0	114.0	65
Africa:						
Egypt.....	2.8	2.9	2.9	2.9	2.9	55
Morocco.....	8.0	8.0	8.0	7.5	8.0	40
Union of South Africa.....	12.0	12.5	10.6	9.0	9.8	62
Total, Africa 6/.....	28.0	29.0	27.0	24.0	26.0	48

TABLE 28.--Native wool: Estimated world production, clean basis, 1954-58, and average clean yield, 1958--Continued

Country	1954	1955	1956	1957	1958 1/	
					Quantity	Average clean yield
	Million pounds	Million pounds	Million pounds	Million pounds	Million pounds	Percent
Asia:						
Afghanistan	9.0	9.0	9.0	9.0	9.0	50
India	42.0	43.2	43.2	44.4	44.4	60
Iran	20.0	21.5	22.1	21.6	22.1	50
Iraq	14.3	10.0	17.0	18.5	15.0	65
Pakistan	24.0	24.0	24.0	24.0	24.0	70
Syria	8.1	8.9	9.9	10.2	10.3	50
Turkey	39.0	39.5	37.3	40.8	38.6	50
Total 7/	160.0	160.0	167.0	172.0	170.0	55
China, Mainland	60.0	63.0	69.0	73.0	80.0	55
Outer Mongolia	24.0	24.0	24.0	24.0	24.0	60
Total, Asia	244.0	247.0	260.0	269.0	272.0	55
Total, Free World 8/	280.0	280.0	285.0	290.0	290.0	55
Sino-Soviet Bloc 8/	250.0	250.0	245.0	250.0	255.0	59
World total 8/	530.0	530.0	530.0	540.0	545.0	58

1/ Preliminary.
2/ Includes Cuba, Greenland, and Guatemala.
3/ Includes Brazil, Chile, Colombia, Ecuador, Paraguay, and Venezuela.
4/ Includes Finland, France, West Germany, Iceland, Malta, Norway, Sweden, and Switzerland.
5/ Includes Albania and Czechoslovakia.
6/ Includes Ethiopia and Eritrea, French West Africa, and Libya.
7/ Includes Cyprus, Israel, Jordan, Lebanon, and Nepal.
8/ Figures may not add exactly because of rounding.

Compiled from data supplied by the Agricultural Attaches and other information.

TABLE 29.--Crossbred wool 1/: Estimated world production, 1954-58, percent of total production and average clean yield, 1958 2/

Country	1954	1955	1956	1957	1958 3/ Quantity	1958 3/ Percent of total wool production
GREASE BASIS	Million pounds	Million pounds	Million pounds	Million pounds	Million pounds	Percent
New Zealand	440.3	446.7	473.6	482.1	516.0	97
Australia 4/	358.0	429.4	428.5	354.0	417.0	27
U.S.S.R.	212.0	249.0	266.0	302.0	343.0	50
Argentina	268.6	260.3	277.2	294.6	305.0	72
Uruguay	163.4	151.6	159.0	170.4	149.0	85
United States 5/	115.1	112.7	112.8	104.5	102.7	35
United Kingdom	71.2	68.3	68.7	74.1	76.0	65
France	43.3	43.3	46.7	48.4	50.1	78
Chile	31.4	34.7	35.8	35.4	36.0	76
Spain	35.3	35.3	33.7	35.3	33.7	45
Brazil	22.9	26.5	28.3	34.2	32.7	54
Italy	24.3	22.7	21.1	21.2	21.2	66
Algeria	18.5	18.7	18.7	18.9	18.9	99
Peru	19.4	20.6	18.3	16.4	17.3	88
Morocco	16.4	16.4	16.2	15.3	16.4	45
Ireland	12.4	13.0	14.0	13.7	15.0	75
Yugoslavia	12.1	11.8	10.8	11.4	13.6	42
Eastern Europe 6/	41.0	43.0	42.0	43.0	42.0	30
Other 7/	65.0	61.0	67.0	64.0	65.0	---
Total 8/	1,975.0	2,065.0	2,140.0	2,140.0	2,270.0	42
CLEAN BASIS						Average clean yield
New Zealand	312.0	318.0	340.0	345.0	365.0	71
Australia 4/	252.0	298.0	298.0	241.0	273.0	65
U.S.S.R.	126.0	147.0	157.0	179.0	201.0	60
Argentina	170.0	165.0	175.0	187.0	194.0	64
Uruguay	106.9	99.1	103.8	111.1	97.3	65
United States 5/	54.9	54.1	54.5	51.9	51.9	50
United Kingdom	46.1	43.3	44.1	48.0	49.0	66
France	18.2	18.2	19.6	20.3	21.0	42
Chile	17.3	19.1	19.7	19.5	19.8	55
Spain	15.4	15.4	15.1	16.2	15.1	45
Brazil	14.9	17.2	18.4	22.6	22.0	67
Italy	10.2	9.5	8.9	8.9	8.9	42
Algeria	9.2	9.3	9.3	9.9	9.0	50
Peru	9.7	10.3	9.1	8.2	8.6	50
Morocco	6.5	6.5	6.5	6.1	6.5	40
Ireland	8.9	9.4	10.1	9.9	10.8	72
Yugoslavia	6.9	6.6	6.2	6.5	7.7	57
Eastern Europe 6/	23.0	24.0	23.0	24.0	23.0	55
Other 7/	32.0	33.0	34.0	33.0	34.0	52
Total 8/	1,240.0	1,305.0	1,350.0	1,350.0	1,420.0	63

1/ Wools from sheep of English or merino blood grading coarser than 60's. 2/ Derived from estimates of wool production in table 26. 3/ Preliminary. 4/ Includes 60/58's. 5/ Based on an analysis of the 1946 clip. 6/ Includes Czechoslovakia, East Germany, Hungary, Poland, and Rumania. 7/ Includes Canada, Mexico, Bolivia, Falkland Islands, Austria, Belgium, Denmark, Finland, West Germany, Netherlands, Norway, Portugal, Switzerland, Tunisia, Union of South Africa, and Japan. 8/ Figures may not total exactly because of rounding.

Compiled from data supplied by the Agricultural Attaches and other information.

TABLE 30.--Crossbred wool, 40's and coarser: Estimated Free World production, 1954-58, percent of total production and average clean yield, 1958

Country	1954	1955	1956	1957	1958 1/	
					Quantity	Percent of total wool production
GREASE BASIS	Million pounds	Million pounds	Million pounds	Million pounds	Million pounds	Percent
Argentina	79.0	79.5	84.1	95.1	98.2	23
New Zealand 2/	8.2	8.4	9.6	13.8	18.0	4
United Kingdom	14.6	14.1	13.5	13.8	14.4	12
Spain	13.3	13.3	12.1	13.3	12.1	16
Ireland	3.3	3.4	3.7	3.6	4.0	20
Italy	4.4	4.1	3.8	3.8	3.8	12
Australia	3.4	4.1	3.4	3.4	3.5	---
Other 3/	10.7	10.1	9.4	9.7	9.8	---
Total Free World 4/	137.0	137.0	140.0	156.0	164.0	3
CLEAN BASIS						Average clean yield
Argentina	53.7	54.0	57.2	64.7	66.8	68
New Zealand 2/	5.8	5.9	6.8	10.0	13.0	72
United Kingdom	9.3	9.6	8.9	9.1	9.5	66
Spain	5.9	5.9	5.4	6.1	5.4	45
Ireland	2.2	2.3	2.5	2.4	2.7	68
Italy	2.2	2.0	1.9	1.9	1.9	50
Australia	2.2	2.6	2.3	2.2	2.2	63
Other 3/	5.5	5.1	4.8	5.0	4.9	50
Total Free World 4/	87.0	87.0	90.0	101.0	106.0	65

1/ Preliminary.
2/ Understated, see text.
3/ Includes Canada, United States, Brazil, Bolivia, Chile, Uruguay, West Germany, Netherlands, Yugoslavia, and Algeria.
4/ Figures may not total exactly because of rounding.

Compiled from data supplied by the Agricultural Attaches and other information.

TABLE 31.--Wool, crossbred 44's: Estimated Free World production, 1954-58, percent of total production and average clean yield, 1958

Country	1954	1955	1956	1957	1958 1/ Quantity	1958 1/ Percent of total wool production
	Million pounds	Million pounds	Million pounds	Million pounds	Million pounds	Percent
GREASE BASIS						
New Zealand.....	48.0	49.8	53.9	70.3	85.0	1
Argentina.....	8.8	8.8	9.3	10.6	10.9	
United Kingdom.....	9.5	9.2	9.4	10.4	10.6	
Australia.....	7.3	7.9	8.3	6.4	7.1	--
Spain.....	6.6	6.6	6.6	6.6	6.6	
Yugoslavia.....	4.0	3.9	3.6	4.0	4.2	1
Uruguay.....	4.8	4.4	3.7	3.3	3.1	
Ireland.....	2.6	2.6	2.8	2.9	3.0	1
Other 2/.....	9.1	9.2	9.0	9.1	9.2	--
Total Free World 3/.....	101.0	102.0	107.0	124.0	140.0	
						Average clean yiel
CLEAN BASIS						
New Zealand.....	33.9	35.6	38.7	50.7	61.0	7
Argentina.....	6.0	6.0	6.3	7.2	7.4	6
United Kingdom.....	6.3	6.1	6.2	6.9	7.0	6
Australia.....	4.5	5.2	5.2	4.2	4.6	6
Spain.....	2.9	2.9	3.0	3.0	3.0	4
Yugoslavia.....	2.3	2.2	2.1	2.3	2.4	5
Uruguay.....	3.4	3.1	2.6	2.3	2.2	7
Ireland.....	1.9	1.9	2.1	2.2	2.2	7
Other 2/.....	4.3	4.4	4.3	4.4	4.4	4
Total Free World 3/.....	65.0	67.0	70.0	83.0	94.0	6

1/ Preliminary.
2/ Includes Canada, United States, Brazil, Bolivia, Chile, Peru, Denmark, West Germany, Italy, Netherlands, Algeria, and Tunisia.
3/ Figures may not total exactly because of rounding.

Compiled from data supplied by the Agricultural Attaches and other information.

TABLE 32.--Wool, crossbred 46's: Estimated Free World production, 1954-58, percent of total production and average clean yield, 1958

Country	1954	1955	1956	1957	1958 1/ Quantity	1958 1/ Percent of total wool production
GREASE BASIS	Million pounds	Million pounds	Million pounds	Million pounds	Million pounds	Percent
New Zealand	100.7	102.3	106.2	112.2	124.0	23
Argentina	11.9	10.9	10.4	11.0	11.9	3
United Kingdom	8.4	8.2	8.3	9.1	9.1	8
Morocco	9.1	9.1	9.0	8.5	9.1	25
Spain	6.6	6.6	6.6	6.6	6.6	9
Uruguay	5.7	4.6	4.7	4.0	3.5	2
Ireland	2.9	3.1	3.3	3.1	3.5	17
Algeria	2.8	3.0	3.0	3.0	3.0	15
Other 2/	15.1	15.9	15.8	16.0	16.6	---
Total Free World 3/	163.0	163.0	167.0	173.0	187.0	4
CLEAN BASIS						Average clean yield
New Zealand	72.9	74.5	77.9	81.9	89.0	73
Argentina	7.7	7.1	6.7	7.1	7.7	65
United Kingdom	5.4	5.2	5.3	6.0	6.0	66
Morocco	3.6	3.6	3.6	3.4	3.6	40
Spain	2.9	2.9	3.0	3.0	3.0	45
Uruguay	3.9	3.1	3.2	2.7	2.4	68
Ireland	2.2	2.3	2.5	2.3	2.6	74
Algeria	1.5	1.5	1.5	1.5	1.5	50
Other 2/	7.8	9.0	8.1	8.3	8.4	50
Total Free World 3/	108.0	109.0	112.0	117.0	125.0	67

1/ Preliminary.
2/ Includes Canada, Brazil, Chile, Falkland Islands, Peru, Denmark, France, West Germany, Italy, Norway, Portugal, Tunisia, and Australia.
3/ Figures may not total exactly because of rounding.

Compiled from data supplied by the Agricultural Attaches and other information.

TABLE 33.--Wool, crossbred 48's: Estimated Free World production, 1954-58, percent of total production and average clean yield, 1958

Country	1954	1955	1956	1957	1958 1/ Quantity	1958 1/ Percent of total wool production
GREASE BASIS	Million pounds	Million pounds	Million pounds	Million pounds	Million pounds	Percent
New Zealand	131.2	135.1	145.5	137.1	140.0	26
Australia	44.7	52.7	56.6	41.4	56.0	4
Argentina	27.8	25.5	24.4	25.8	27.8	7
United Kingdom	11.5	12.1	12.5	14.0	14.6	13
Algeria	9.8	10.0	10.0	10.0	10.0	50
United States 2/	8.6	8.6	8.6	8.6	8.6	3
Brazil	3.4	4.5	4.3	6.8	6.6	10
Spain	5.5	5.5	5.5	5.5	5.5	7
Uruguay	5.8	5.3	4.9	5.0	3.9	2
Ireland	2.4	2.6	2.8	2.7	3.0	15
Other 3/	14.4	14.1	14.0	14.0	14.1	---
Total Free World 4/	265.0	276.0	289.0	271.0	289.0	5
CLEAN BASIS						Average clean yield
New Zealand	94.3	97.4	105.8	98.7	100.0	72
Australia	29.1	34.2	36.8	26.9	36.0	65
Argentina	18.1	16.5	15.9	16.8	18.1	65
United Kingdom	7.6	8.0	8.2	9.2	9.6	66
Algeria	4.9	5.0	5.0	5.0	5.0	50
United States 2/	4.8	4.8	4.8	4.8	4.8	58
Brazil	2.2	2.9	2.8	4.4	4.3	65
Spain	2.4	2.4	2.5	2.5	2.5	45
Uruguay	3.9	3.6	3.3	3.4	2.7	68
Ireland	1.8	1.9	2.1	2.0	2.2	75
Other 3/	6.9	6.8	6.7	6.8	6.8	50
Total Free World 4/	176.0	184.0	194.0	181.0	193.0	67

1/ Preliminary.
2/ Includes 46's; derived from estimated breakdown for the 1958 clip compiled by the U.S. Department of Agriculture.
3/ Includes Canada, Bolivia, Chile, Falkland Islands, Denmark, France, Italy, Norway, and Portugal.
4/ Figures may not total exactly because of rounding.

Compiled from data supplied by the Agricultural Attaches and other information.

TABLE 34.--Merino wool: Estimated world production, 1954-58, percent of total production and average clean yield, 1958 1/

Country	1954	1955	1956	1957	1958 2/ Quantity	1958 2/ Percent of total wool production
GREASE BASIS	Million pounds	Million pounds	Million pounds	Million pounds	Million pounds	Percent
Australia 3/	925.0	987.6	1,135.5	1,079.0	1,160.0	73
Union of South Africa 4/	285.9	292.4	299.9	281.9	294.0	94
United States 5/	194.7	192.1	194.6	188.1	189.8	65
U.S.S.R.	84.0	111.0	125.0	151.0	182.0	25
Argentina	77.2	84.4	96.1	93.9	97.0	23
Brazil	33.0	34.0	33.5	32.5	27.5	45
Uruguay	28.8	26.7	28.1	28.0	27.0	15
Spain	23.6	23.6	22.4	23.6	22.4	30
New Zealand	14.8	15.1	17.0	14.3	14.0	3
France	11.0	11.0	12.0	12.0	13.0	20
Portugal	7.6	8.4	8.9	9.6	9.8	43
Chile	8.4	9.2	9.5	9.5	9.6	20
Mexico	7.1	6.6	7.6	8.0	8.4	80
Germany, West	5.8	5.5	5.7	6.2	6.4	51
Eastern Europe 6/	22.0	24.0	24.0	24.0	24.0	18
Other 7/	15.0	15.0	14.9	14.6	14.6	---
Total 8/	1,745.0	1,845.0	2,035.0	1,975.0	2,100.0	40
CLEAN BASIS						Average clean yield
Australia 3/	494.0	538.0	639.0	604.0	655.0	56
Union of South Africa 4/	143.0	148.5	156.9	147.4	153.0	52
United States 5/	81.5	80.1	80.8	76.9	76.9	41
U.S.S.R.	38.0	50.0	56.0	68.0	82.0	45
Argentina	34.7	38.0	43.2	42.3	43.6	45
Brazil	16.5	17.0	16.8	16.0	14.0	50
Uruguay	14.7	13.6	14.3	14.3	13.8	51
Spain	8.8	8.8	8.9	9.3	8.6	38
New Zealand	8.8	8.9	10.2	8.6	8.4	60
France	4.7	4.7	5.0	5.2	5.5	42
Portugal	3.0	3.4	3.6	3.8	3.9	40
Chile	4.2	4.6	4.8	4.7	4.8	50
Mexico	2.4	2.3	2.6	2.8	2.9	34
Germany, West	2.7	2.5	2.6	2.9	2.9	46
Eastern Europe 6/	11.0	12.0	12.0	12.0	12.0	50
Other 7/	6.7	6.7	6.7	6.6	6.6	45
Total 8/	875.0	940.0	1,065.0	1,025.0	1,095.0	52

1/ Includes wools grading 60's and finer, based on estimates of the proportion of merino in total wool production as shown in table 26.
2/ Preliminary.
3/ Excludes 60/58's.
4/ Includes "native," coarse, and colored.
5/ Based on an analysis of the 1946 clip.
6/ Includes Czechoslovakia, East Germany, Hungary, Poland, and Rumania.
7/ Includes Canada, Peru, Italy, Yugoslavia, Turkey, Algeria, and Kenya.
8/ Figures may not total exactly because of rounding.

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